

ECHO IRELAND

IRISH RADIO TRANSMITTERS SOCIETY

SEPTEMBER 2014 - 82 YEARS

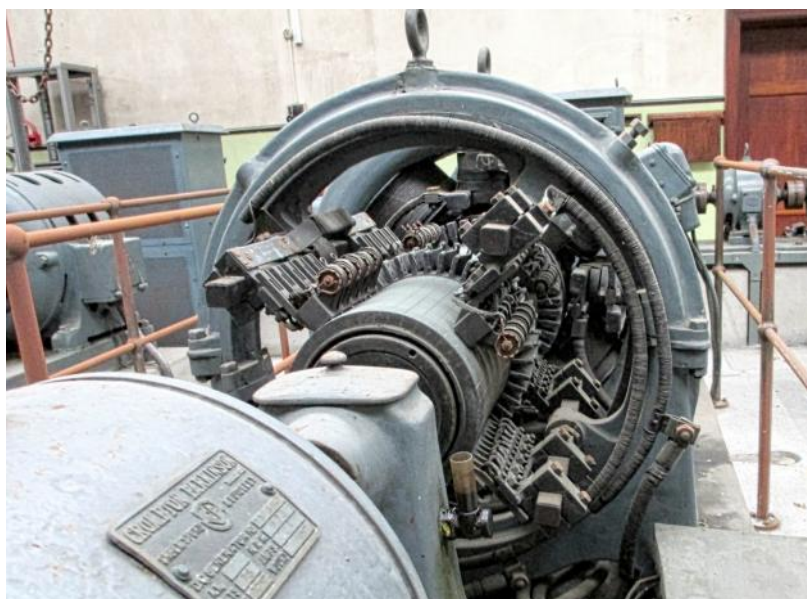


FIRST BRENDAN MEDAL AWARDED TO BRIAN JUSTIN WA1ZMS



ARRL
100
YEARS

A Personal Perspective



Crompton Parkinson HV Generator at Moydrum, Athlone

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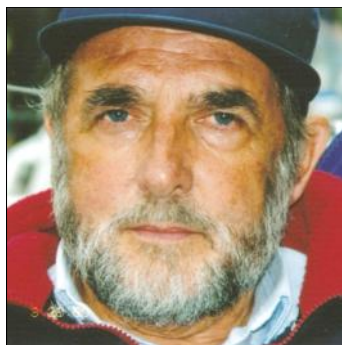
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Silent Key Kevin Dillon EI2AH



Kevin Dillon EI2HM became a silent key on 6th June 2014, following a long illness. He is survived by his wife Miriam, children and grandchildren. His interest in amateur radio stemmed from his involvement in sailing and the use of marine radio. Kevin had many hobbies, his other interests included fishing, beekeeping, photography and chess.

Kevin donated some HF equipment to the society; this is currently being evaluated and will be offered for sale in due course, with the proceeds being used to promote amateur radio.

May he rest in peace.

Silent Key Melyvn Irvine MI0MSR



The death has occurred of RSGB Deputy Regional Manager **Melvyn Irvine MI0MSR**, who passed away suddenly on Thursday 29th May 2014. Melvyn was a faithful member of the Region 8 team and was well known as Jim Bob's sidekick at rallies the length and breadth of the country.

His funeral took place Sunday 1st June 2014 from his home, 7 The Brambles, Devrock, Co. Antrim.

May he rest in peace.

Silent Key JJ O'Carroll EI6AH



John (JJ) O'Carroll EI6AH, passed away August 12th 2014. JJ was predeceased by his loving wife Mary and son Francis. He is survived by two children, four grandchildren, family and friends.

JJ had a long association with Amateur Radio he kept the memory of the Marconi Station in Ballybunion very much alive.

May he rest in peace.

Silent Key Roderick Mooney EI2P

Roderic Mooney EI2P passed away on Friday August 8th 2014 in his 96th year. He was predeceased by his wife, Kate, of 67 years on July 29th 2014. He is very sadly missed by his six children, his nine grandchildren and relatives and friends.

Roderic was first licensed in 1936. To show how he was involved from the very early days of experimental amateur radio it is worth recalling that at the time his licence was issued there were only about 18 others in existence.

Throughout his life Roderic continued to be an early adopter of technology whether it was his robotic lawn mower (found guilty of causing him QRN!) or his use of software defined radio.

When Roderic was in his mid-eighties his family called a halt to his ladder climbing and aerial erecting activities. Seán EI4GK and Seán EI7CD would go to his house to assist. Both have fond memories of the graciousness of Roderic and of Kate's homemade fruit cake.

Roderic was a long standing member and Trustee of IRTS. And at the time of his death was Ireland's longest licensed radio amateur.

Speaking to the overflow attendance at his funeral service in the Victorian Chapel, Mount Jerome Crematorium IRTS President Séamus EI8BP said that it was a mark of esteem with which Roderic was held by his fellow radio amateurs that on hearing of his passing the word "Gentleman" was used so often. Among the



attendance were fellow IRTS Trustee and former President Seán EI4GK, IRTS Hon Vice President Seán EI7CD, former IRTS President Paul EI5DI and Gary O'Hanlon from South East Communications.

We send our deepest sympathies to his family and friends.

May he rest in peace.

GEOPARK 2014 EI2GEO

Sean Byrne EI2HQB
PRO SEARG



The South Eastern Amateur Radio Group for the 7th consecutive year took part in the Geoparks Communications weekend which took place over the weekend of 24th & 25th of May to coincide with European Geoparks week. The event was co-ordinated by Martin G3VOF of the Riviera Amateur Radio Club, and awards are available for working Geopark stations including the main station GB6GEO. Although most activity was in Europe, a number of stations were QRV from Geoparks around the world. SEARG were QRV as EI2GEO from the Copper Coast Geopark in Co. Waterford. The Copper Coast European Geopark is located on the Co. Waterford coast. It extends from Fenor in the east to Stradbally in the west and as far north as Dunhill. The Copper Coast gets its name from the 19th century copper mines that were once predominant in the area.

Although the weekend did not officially start until Saturday, club Chairman Dennis EI2HSB along with his daughter Molly braved the elements on the Friday night and camped out at the Geopark. That Friday night was a rough night, even indoors, so congratulations to Dennis and Molly for sticking it out on the coast in a tent. Saturday morning seen most of the crew arrive and two antennas were erected fairly quickly, a CW 80 Special and a doublet. Once the antennas were erected, David EI6GVB quickly got the radio gear set up. Thanks to David for providing his new Icom 7100 for the event. The IC 7100 was a dream to operate and even the battle hardened Yaesu/Kenwood op's there were totally impressed with it. Although band conditions were poor at the start a few contacts were logged, but once conditions improved almost all operators had a pile up running at some stage throughout the event. From what we gathered the highest number of QSOs logged for the EI2GEO annual event were logged at Geopark 2014.

Although the rain fell heavily early on Saturday we had many visitors to the station with people as far away as France and the US curious to see what we were up to. Club member and retired chef David Connolly EI3HTB cooked what could be only be described as a feast for all the people present and even people just visiting the Geopark were treated to a dinner as well. Paula McCarthy, General Manager of the Copper Coast Geopark and Visitors Centre along with her husband Eddie joined in the event and spent the night on site with us. The Saturday night finished off well into early

Sunday morning with lots of people gathered around the campfire cooking sausages on the fire and enjoying a drink.

The Sunday morning, Mark Wall EI7IS worked some nice CW contacts on 17m as bands slowly opened. We had many more members and non-members visit us and later that day EI2GEO 2014 sadly came to an end as all the lads headed for home. Even though the weekend had its fair share of rain, the atmosphere and banter was the best of any Geopark event I have ever taken part in.

On behalf of The South Eastern Amateur Radio Group I would like to thank the following people without whom EI2GEO 2014 would not have been a success. Thanks to David Ginda EI6GVB for providing the antenna's and also the Icom 7100. Thanks to Mark Kilmartin EI4FNB for lending us his barbeque equipment at short notice and to David Connolly EI3HTB and his XYL for providing the food and for preparing it and all the salads and also for cooking for people as they arrived at various times during the event. Thanks to Bernadette Drennan for the lovely deserts. Thanks to all the staff of the Geopark Centre who made us feel so welcome and made sure we were not stuck for anything. Thanks to all our radio friends for calling in to see us or giving us publicity on social media during the event and to all the stations who worked us on the radio also. Lastly we would like to express our sincere thanks to Paula McCarthy, Manager of the Copper Coast Geopark Centre for making this excellent site available to us to put the EI2GEO call on air over the past number of years. Although EI2GEO 2014 has just recently ended I am already looking forward to EI2GEO 2015.



Martin EI2HQB and Dennis EI2HSB get to grips with the antennas



David EI3HTB tries operating while cooking



Gary from South East Communications and Dennis EI2HSB



Visitors and SEARG members are all happy at the event



SEARG ops before the event came to an end

Contest Calendar

All times UTC

September 2014

06-07 Sat 0000 – Sun 2359
06-07 Sat 1300 – Sun 1300
 13-14 Sun 0000 – Sun 2359

All Asian DX Contest SSB
IRTS HF SSB Field Day SSB
 Worked All Europe DX Contest SSB

RS + Age
RS + Serial Number
 RS + Serial Number
 - QSO EU to non-EU only
 RST + Serial Number
 RST + CQ Zone

20-21 Sat 1200 – Sun 1200
 27-28 Sat 0000 – Sun 2359

Scandinavian Activity Contest CW
 CQ WW RTTY DX Contest RTTY

October 2014

04-05 Sat 0800 – Sun 0800
 04-05 Sat 1200 – Sun 1159
 06-06 Mon 1600 – Mon 1959

Oceania DX Contest SSB
 Russian WW Digital Contest RTTY45, BPSK63
 EU Autumn Sprint SSB

RS + Serial Number
 RST + Serial Number
 Your Call + Other Call +
 Serial + Name
 RST + Serial Number
 RS + Serial Number
 Your Call + Other Call +
 Serial + Name

11-12 Sat 0800 – Sun 0900
 11-12 Sat 1200 – Sun 1200
 13-13 Mon 1600 – Mon 1959

Oceania DX Contest CW
 Scandinavian Activity Contest SSB
 EU Autumn Sprint CW

RST + Age
 RS(T) + Serial Number
 RS + Serial Number

18-19 Sat 0000 – Sun 2359
 18-19 Sat 0000 – Sun 2359
 19-20 Sat 1800 – Sun 2100

JARTS WW RTTY Contest RTTY
 Worked All Germany Contest CW/SSB
 CQ WW DX Contest SSB

November 2014

01-10 Sat 1200 – Sun 1200
 08-09 Sat 0000 – Sun 2359
 08-09 Sat 0700 – Sun 1300
 08-09 Sat 1200 – Sun 1200
 22-23 Sat 1200 – Sun 1200
 30-01 Sat 1200 – Sun 1200

Ukrainian DX Contest CW/SSB
 WAE DX Contest RTTY
 JIDX DX Contest SSB
 OK/OM DX Contest CW
 LZ DX Contest CW/SSB
 CQ WW DX Contest CW

RS(T) + Serial Number
 RST + Serial Number
 RS + CQ Zone
 RST + Serial Number
 RS(T) + Serial Number
 RST + CQ Zone



Amateur Radio and the ARRL at 100

- a personal perspective by Paul EI5DI

I'm now seventy and, for as long as I can remember, have always enjoyed and been intrigued by radio. Once, aged about four, I hauled the family radiogram away from the wall and squeezed round the back - fully expecting to see a miniature orchestra behind the illuminated dial, that wonderful glass panel filled with exotic names like Hilversum, Moscow, Droitwich and Athlone. That's not the only time I've been disappointed! In effect, I've been around for 70% of the time since the establishment of ARRL. Amateur radio has developed quite differently in the USA and in Europe. Indeed, the ARRL's name says it all - "American Radio Relay League". A considerable part of its early activities included the relaying of third-party messages, bypassing the charges imposed by the commercial telegraph and telephone operators. In Europe, on the other hand, communications monopolies were zealously guarded by the governments of each country - with no question of third-party traffic ever being allowed. In North America, phone-patch was always taken for granted - in Europe it was always prohibited.

Free Communications

For the baby-boomers of the 1960s and 70s, one of the main attractions of amateur radio was that it gave worldwide communications for "free". We thought of ourselves as being special because, at that time, international telephone calls could not even be dialled directly and they cost an arm and a leg. Nowadays, we still think we are special - the only difference is that we are not. What we do is of no use, and no relevance to anyone outside our special-interest group. We are the train-spotting anoraks of the digital communications generation. Anyone with a broadband connection has access to instant worldwide communications, both audio and video - and free for all practical purposes. What was once special is now commonplace. This tends to makes radio amateurs and amateur radio societies uneasy. We enjoyed being special; we saw ourselves as uniquely qualified and ready at a

moment's notice to respond to any emergency - national or international. These days we are no better qualified (with few exceptions) to respond to emergencies than any kid with a mobile phone, and our so-called qualifications have been watered down to the extent that they are largely irrelevant. These same kids know nothing about short waves, never mind the medium or long waves. They don't listen to live radio any more, and they don't buy newspapers. Their world is different, there is no magic in radio.

The Internet Threat

How have we and our radio societies adapted to the threat of the internet? We have embraced it as if it was the saviour of amateur radio - all to the extent I confidently predict that in another 100 years we will read how, early in the 21st century, radio amateurs played a major part in pioneering the internet. We, well most of us, have sold our soul to the internet. We are turkeys voting for Christmas. Instead of enjoying and preserving the complete independence of communications that is the defining characteristic of amateur radio, we use the internet to find stations to work for DXing and contesting, and we use remote receivers and transmitters that cannot work without the internet. US amateurs believe remote control is as normal as phone-patch - why would anyone question it, doesn't it get more people on the air? Well, it certainly gets more people on the internet. Compared to fifty, or even fifteen years ago, the bands are deserted. Few of us call CQ, or tune up and down the bands hoping to be the first to catch a juicy bit of DX - there's no need, just keep an eye on the cluster and let others do the donkey work. The only things that generate significant activity these days are contests and DXpeditions. There is no longer a natural progression from SWL to licensed amateur. It's not just the amateur bands that are deserted. What has happened to the broadcasters, the aircraft, the ship-to-shore traffic and the US Military (MARS) bands? All sources of great entertainment - and all gone, or all going, to satellite phone and internet audio streams.

Dealing with it

National radio societies, including the ARRL, understand that radio holds no attraction for younger people weaned on tablets and smart phones, who take their worldwide communications for granted. This is bad news for the societies - especially those with major investments in staff and buildings. How can they maintain revenue, never mind increase it? There are jobs at stake! The answer is simple - embrace the internet. Actually, though that's what many are doing, it's not really the answer. If absolutely everyone is using the internet, what's the point of adding RF propagation and its associated uncertainties to the mix? Isn't Skype more reliable? Indeed, the inescapable conclusion is that once amateur radio becomes indistinguishable from the internet, it will have ceased to exist. In the meantime, use of the internet serves only to undermine the integrity of amateur radio. However, the "radio" societies don't care - there are jobs at stake. The radio manufacturers don't care either - they, too, have jobs at stake. Since the inexorable trend is towards software-controlled radios, it's easy to add features such as internet access - so they go ahead and do it, just because they can.

Adapt or Die

ARRL, and other societies, argue that they are merely keeping up with the times. They say that amateur radio has to change, just like any other technical hobby. It's survival of the fittest, and we must adapt or die. After all, the technology (and the internet) is not going to go away - what's been invented cannot be un-invented. That's all true, but it's also irrelevant. When any activity changes to the extent that its nature (the very thing that gives it its name) changes, then the activity needs a new name. Instead of being radio amateurs and radio societies, we are becoming hybrid-communications amateurs and societies. The ARRL recognises this insofar as an inscription in ARRL HQ, on a series of plaques outlining significant historical events, says "2002 - Advances in computers, leading to the development of hybrid systems such as EchoLink". We all accept that using a net disqualifies an

activity from being fly-fishing (you may still be fishing, but you're not fly-fishing), or using an engine means you can't describe your activity as sailing (you may still be boating, but you're not sailing). Why, then, does the ARRL blindly claim that using the internet in no way disqualifies an activity as being amateur radio - even when you can't get "on the air" without it. It seems that, eventually, we will become hybrid-communications amateurs and societies unless we step back and choose to preserve our core activity. The fact, although many will deny it, is that amateur radio is a legacy hobby in terms of its core activity which has been superseded by the internet, though we are free to use the latest technology in its pursuit. In this respect it's similar to fly-fishing or sailing. Neither is going to go away just because of advances in technology represented by nets or engines. As with other special-interest groups, we accept our self-imposed limitations and get on with enjoying the activity and its challenges for its own sake. If we cannot communicate without using public switched networks then, whatever we think we're doing, it's probably not amateur radio.

DXCC & Remote Control

As it happens, there's a glimmer of hope in that the ARRL is gradually acknowledging there may be some ethical issues with remote control, at least in the context of DXCC awards. In the ARRL Letter of 7th August 2014 we see, under the heading of "Referred to Committee", "The Programs and Services Committee (P&SC) is to closely examine the issue of remotely controlled stations, noting that these 'pose both opportunities and

challenges.' The P&SC would 'consider the possible advantages, disadvantages, and any potential ethical issues as they relate strictly to the DXCC program' and report its findings by the Board's January 2015 Annual Meeting". The only problem is that, while the P&SC acknowledges the potential for abuse of the DXCC program in terms of individuals having access to multiple transmitter and receiver locations, not to mention the possibility of "virtual" DXpeditions with no operators located at the DX location, they turn a blind eye to the fact that remote control, with its continuous dependence on the internet, undermines whatever claims we may have to our bands. When the regulatory authorities, in our case ComReg, wake up to what is happening in the name of amateur radio, we will have regulations imposed on us - it's clear that amateur radio is no longer the self-regulating service it was supposed to be. The common issue with all forms of remote control, whether hunting, or amateur radio, or photography, or armed drones, is that "being there" makes a difference - and there are inherent ethical issues with them all. I once had a telephone call from a US contester who was at a loss to understand why I didn't regard remote control as amateur radio - "after all", he said, "telephone sex is still sex"! Well, he was right, but he was also very wrong in ignoring the big picture - that "being there" makes a difference, and the result doesn't always justify the means. In all competitive activities, including contesting and (DXCC) award chasing, how things are done matters. For more on this, please see

ei5di.com/hunting1.html

Ageing Amateurs

Anyway, back to the ARRL and their recent Centennial celebrations in Hartford CT. As it happens, I also attended their 50th anniversary celebrations in New York City in 1964 - I was there as a student, working for the summer. Naturally, there were many differences, but the most striking one was the age profile of those attending. In the 60s, amateur radio was a young person's game, with the average age of hams being twenty or thirty years lower than it is now. At that time I regarded anyone over forty as old, though I've changed my mind in the meantime. This age difference was painfully evident in Hartford, where there were few attendees under the age of fifty. It's clear that amateur radio is not just a legacy hobby, it's a diminishing legacy hobby. A graphic way of understanding what's happening is to check the size of recent Silent Key pages in QST (no need to count the entries), and compare them with twenty-five or so years ago. The ARRL recognises this decline and, again, in its Letter of 7th August, states "In other business, the ARRL Board of Directors voted, without offering specifics, to support 'a significant increase in the resources directed to generating new amateurs, with particular emphasis on increasing diversity.' The ARRL staff was directed to propose a course of action to meet that goal". This is all completely understandable, they have to do something, though I've heard that one of the groups they're targeting in the interests of diversity is boating enthusiasts. I wouldn't be surprised if they go after flying enthusiasts. And why stop at that? How about police officers and taxi drivers - don't they all use radios? I'd suggest they'd be better



making CBers a priority - at least some of them use RF for its own sake. I just hope that their notion of "diversity" doesn't include the internet and other, yet to be invented, communications options. If it's not RF, it's not radio.

Radios over the years

To get an idea of other changes, here are some brand names from the 1960s - Hallicrafters, Drake, Hammarlund, Collins, Heathkit, National Radio, Swan, Eddystone, KW Electronics - at the time we couldn't imagine a world without them. Some brands have survived - Vibroplex, Hi-Gain, Mosley, Cushcraft - all with the emphasis on hardware rather than electronics. New ones emerged, especially from Japan - Yaesu, Icom, Kenwood - together with Ameritron, Alpha, FlexRadio, MFJ, Ten-Tec, Elecraft, SteppIR. How many of these will be around in another 50 years? Very few, going on past experience, and, for the future, we'll have great new products from countries that may not have been respected in the past, including China, India and perhaps Brazil.

It seems there is an inexorable trend away from traditional "metal" radios towards software-defined units which don't need a box at all except for a few remaining RF components - mostly on the transmitting side. What this means is that the major Japanese suppliers, Yaesu, Icom and Kenwood had better get their act together and ditch the big boxes full of discrete components and custom ICs that are expensive and getting ever harder to source. Ten-Tec recently learned this lesson the hard way with their now-discontinued Orion rigs - they had great receivers but were uneconomical to manufacture. Just as most cars feel comfortable on a smooth empty road at 50kph, so most rigs sound good on a quiet band. But it can be a different story on a busy band. In this respect, the best indicator of a receiver's performance on a busy band is its dynamic range at spacings of 2kHz or less from strong unwanted signals. The Sherwood Receiver Test Data table tells it straight -

www.sherweng.com/table.html

Look carefully, and you'll see just how bad some well-respected rigs are, especially the Yaesu FT2000 and FT1000 ranges. On the other hand, the current FT5000 is one of the very best. If you have or had a favourite radio, check its position in the table and marvel at how you could have got it so

wrong in thinking it was a really good performer and an inspired choice. Admittedly, this doesn't matter so much when your priorities are looks rather than performance.

Centennial Banquet

The ARRL Centennial was great fun, and the ARRL staff and volunteers went out of their way to help everyone. It ran for three days, from Thursday to Saturday 17-19 July, with the first day dedicated to training streams. I attended Contest University, with well-known testers (including K3LR and W3LPL) giving interesting presentations to some 200 participants. In many respects, however, they were largely preaching to the converted; after a request for a show of hands from anyone who considered themselves to be inexperienced or new to contesting, only about 10% indicated this.

The trade show and general-admission lectures and presentations started on Friday and were very well-attended. Some 900 people were seated for the Centennial banquet on Friday evening - fully booked in advance, with tickets at \$75 which, although pricey, compares favourably with the 1964 price of \$14. The banquet itself was a model of efficiency, with four courses served and cleared in exactly two hours, including speeches - and, joy of joys, the main course was served on hot plates - not so common in North America. The guest speaker was Craig Fugate KK4INZ, Administrator of FEMA (the Federal Emergency Management Agency). He said, in effect, that amateurs are not fully prepared for emergencies if they are in any way dependent on public switched networks. In a way, that's stating the obvious, but not all emergency communications enthusiasts like to be reminded of it.

Back in 1964, the guest speaker was Barry Goldwater K7UGA, the Republican Presidential Candidate that year - he lost to Lyndon Johnson in the November election. I can't remember what he had to say, but he had a reputation as a bit of a right-winger who would not hesitate to use force in the USA's interests - I brought home a campaign button saying "Goldwater in 64, Cold Water in 65, Bread & Water in 66".

W1AW

On the Friday afternoon, I took the 20-minute shuttle-bus ride to W1AW at ARRL's HQ in Newington CT. That was fun - the original W1AW building now serves as a museum, together with several well-equipped guest operating positions, and control equipment and transmitters for ARRL's news and other broadcasts. The nearby modern HQ building hosts a reception and display area, administrative and QST production offices, well-equipped labs (including one room serving as a Faraday Cage, blocking all external RF including cell phone signals), and a comprehensive display of vintage rigs and other equipment. As visitors, we could wander wherever we wanted, and ask any questions of anyone - it was all very pleasant and relaxing, thanks to the ARRL staffers and volunteers who were, without exception, friendly and helpful.

There's one slightly disconcerting feature by the HQ entrance - it's a group of granite headstones engraved with names of major donors to the ARRL's Second Century Campaign. They look just like tombstones and you might think you about to enter a funeral parlour or crematorium. For the worthy donors concerned, it must be a bit like seeing your own obituary. On a more cheerful note, if you ever find yourself in downtown Hartford CT, I'd recommend Joe's Montana Grill, just opposite the Convention Centre - they do a great buffalo burger.

In conclusion, I'd suggest that the way to preserve amateur radio, if indeed it's worth preserving, is to get off the internet and get on the air. I like to think I'm a radio amateur, not a hybrid-communications amateur, and that's the way I intend to stay for whatever time I have left - I've reluctantly come to the conclusion that I'm unlikely to be around for the ARRL's 150th anniversary celebrations.

The ARRL should be congratulated for having survived and thrived for 100 years, and for its countless services to members and to amateur radio generally. For much of this time it has been a radio society, though it seems that for much of the next 100 years it will either become very much smaller or it will change into something else entirely. In this respect, at least, it's no different from IRTS.



1964 : Above: Barry Goldwater K7UGA and Pete Hoover W6ZH, ARRL President

Right: EI5DI (in light jacket) at the Banquet



Above: Dave K1ZZ addresses the delegates

Right: Séamus EI8BP presents Centennial gift to ARRL President, Kay N3KN

Far Right: Luso Towers Stand



Restored Collins S-Line Comms Van from 1964



The Diamond Club Terrace, at ARRL HQ in Newington CT.



M6WCR, RSGB



A small selection of ARRL publications



Quality hardware from 2X Arrays, solid metal loading coils for their 40m beam elements



Second Century Campaign donors at ARRL HQ



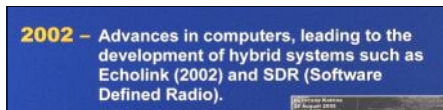
Bob Allison WB1GCM - in the Faraday Cage at ARRL HQ used for Product Review lab testing



Piero Begali I2RTF with his fine range of morse keys and paddles



RSGB President John G3WKL, Olof G0CKV, Paul EI5DI





Radio Éireann - the AM Transmitters at Athlone

Andy Linton EI2HH

Editor's Introduction

Radio Éireann's first high-power (initially 50kW, and later 100kW) AM transmitter was rushed into service in time for the 1932 Eucharistic Congress, and was located at Moydrum, near Athlone. It was built by the Marconi company, and operated daily until the late 1950s, when it was replaced by a similar-power Brown-Boveri unit. In 1975, RTE moved Radio 1 transmissions to a new site at Tullamore, and the Athlone site was silent until the start of Radio 2 in 1979, at which time a Continental Electronics unit was used until the end of RTE's Medium Wave transmissions in 2008.

What is unusual is that none of the old Athlone transmitters were removed or broken up, and the Moydrum building may be the only surviving example with three generations of AM transmitters in a single location. Indeed, the Marconi transmitter is possibly the oldest surviving transmitter of its type in the world. For this reason, there is great interest in preserving the building as a "living" museum. In March 2012 the Athlone Marconi Centre Heritage Group held a public meeting as part of a feasibility study looking at potential visitor, educational, and recreational uses for the site. The feasibility study, with support from Westmeath Community Development Limited through the Rural Development (LEADER) Programme, and Athlone Town Council is being conducted by TTC - Tourism & Transport Consult International. IRTS with Shannon Basin Radio Club strongly support this initiative, as it may well lead to a permanent exhibition of radio-related activities - similar to what has already happened at Bletchley Park in England.

The following report is by Andy Linton EI2HH - Director at Total Broadcast Consultants, Waterford:

www.totalbroadcast.net

I first 'met' Clive Warner, in the virtual way that we do these days, via Facebook. Getting chatting, I discovered that Clive, now retired, had a very interesting career as a transmitter engineer with the likes of Marconi, the BBC, Radio Caroline, Capital Radio (London), the Foreign Diplomatic Radio Dept of the British Government. He worked on high power broadcast transmitters worldwide.

When he learned from me about the RTE AM Transmitter site in Moydrum, Athlone - particularly that it still housed the 1932 Marconi 100kW AM transmitter, he was enthused, as it is one of the few surviving examples of its kind, and similar to the very first high-power transmitter Clive had worked on as a young fella!

Clive is now retired and living in Mexico, but he decided to visit the UK in April this year, to go back to some of his old haunts, meet up with ex-colleagues and attend the Radio Days conference in Holland. Being so close, comparatively, to Athlone, he asked whether it would be possible for us to visit there.

A call to RTE (actually 2rn, RTE's transmission network company) engineer Tom Mollens was made and he agreed to show us around the mothballed transmitter site at Athlone.

I met Clive (in person, for the first time!) in Dublin and we drove to Athlone. During the drive, Clive regaled me with marvellous tales of his experiences all over the world, working on AM transmitters in deserts, wild parts of the UK and on ships.

I'd been to Moydrum a few times before, as part of my work as a broadcast engineer. It's a fascinating place with three generations of high-power AM transmitters, all still there. The 1934 Marconi sender, the 1957-installed Brown Boveri 100kW unit and the 1979-installed Continental electronics 2x50kW units. All there, all eerily silent.

Tom Mollens met us, and we started looking around the transmitter hall. The most wonderful engineering meets the eye! High-voltage power supplies for the Marconi were derived from rotary converters - basically a mains-powered DC generator - 220v AC in, 15,000v DC out!

Clive said it was for him like stepping back through time. Between us we worked through the various stages of power supply and transmitter, identifying what each cabinet did and how it all worked. The highest power transmitter I've ever worked on is 10kW - sadly AM transmitters are few and far between on this island these days, so for me this was most interesting.

The Marconi transmitter, we ascertained, was crystal oscillator, oscillator driver, intermediate power amplifier with 5kW output, PA stage with 50kW output - all twice, with the PAs combined to produce 100kW. All, of course, valve-based, with the most exotic-looking valves I'd ever seen! Huge tank capacitors, massive hand-made coils, mercury vapour rectifiers as big as a dustbin (filled with mercury!). The high-power valve stages were water/steam-cooled, so there's plumbing mixed in with the high-voltage components and out back a condenser/filter arrangement for the cooling water.

The output of this transmitter, then Radio Éireann, was on 565kHz originally, with the allocation changing to 567kHz in 1975. By then though the station had fallen silent as RTE had commissioned their new site at Tullamore. Moydrum was revived in 1979 when Radio 2 (later '2FM') came on air, on 612kHz. The old, noisy and no doubt horribly inefficient Marconi sender was replaced in 1957 by a then-modern Brown Boveri unit, and the launch of RTE Radio 2 in 1979 brought the installation of two Continental 317-series 50kW transmitters, also combined to produce 100kW.

There's some speculation about the antenna system, but certainly from very early in the 1930s two towers were used, supporting a 'T' antenna. The antenna coupling house is still there, with the remains of a huge matching coil and capacitors, but one of the towers has been removed. RTE's

shortwave service was also to have been broadcast from the site – there is evidence of feed-through insulators and other ATU arrangements, but apparently even though the transmitter was acquired and installed, the project was quickly cancelled.

Our day at this majestic, though somehow sad transmitter site ended with a view of the grounds, the building, and the taking of many photographs. There are plans to properly preserve

this historic transmitter site (the world's first national transmitter, I believe) but as usual funding is the problem. It would great to see this happening, as the effects of leaving the building without the warmth and dryness the transmitters originally provided are starting to show.

Let's hope the preservation goes ahead. This unique part of broadcasting history deserves to be cherished.
EI2HH

Some interesting references

homepage.eircom.net/~totalbroadcast/athlone2.html www.rte.ie/archives/exhibitions/681-history-of-rte/
www.rte.ie/archives/exhibitions/681-history-of-rte/708-rte-2000s/289803-last-mw-transmitter-closes/
radiomuseet.web.pin.se/wordpress/?p=3654 www.mixcloud.com/AthloneCommunityRadio/athlone-calling/

Photos by Andy Linton & Ulf Nilsson



The RTE Building at Moydrum



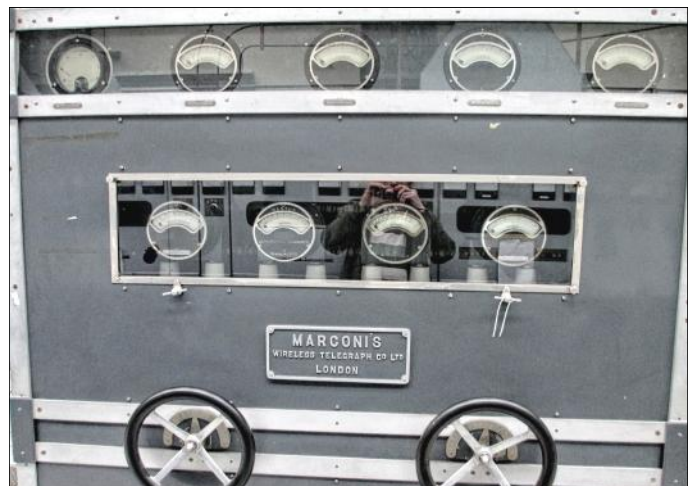
High-voltage Generators for the Marconi Transmitter



Continental Electronics AM Transmitter



Brown Boveri AM Transmitter





HF Happenings

with Anthony Murphy EI2KC

The slump in conditions that I wrote about in April has, unfortunately, continued. The summer has been inauspicious in terms of HF propagation, and I'm sure many of you migrated out of the shack to engage in other summertime activities. And who would blame you, with conditions as poor as they have been at times?

As I write this, the sunspot number is 27. A few days ago, it was zero. We haven't had a spotless day since August 2011. The odd thing is that 2011 was a good year for sunspots, and for propagation. Maybe 2014 will turn out the same? Who knows? One thing we do know about the current sunspot cycle is that it is very unpredictable! When this particular amateur got his licence in October 2009, the bands were in very poor shape. That first winter on the air was a difficult one. The high bands (10m and 12m) were shut all the time. 15m was very quiet, and 17m and 20m would close at night. I had only 40m and 80m SSB to entertain me - that was before I learned CW.

Lately, conditions have reminded me of that time. The main difference now is that I have better antennas. But that doesn't always count for much. If propagation isn't there, it isn't there. I notice that there is an 11-day period in my log in which I didn't work a single station on HF in early July. That's very unusual for me. Even when life is very busy, I still find time to get a few minutes on the radio and make some QSOs. I guess I just lost interest, given the poor conditions.

There were a couple of fantastic openings on 6 metres to compensate for the situation on HF. One opening to the Caribbean allowed me to work four new DXCCs in one evening on that band. But even 50Mhz disappointed, with long stretches, perhaps four or five days, with little or no activity.

There has been a distinct lack of rare DX on the bands too. I know it's not possible to coordinate multiple DXpeditions, but there were so many rare activations simultaneously in late 2013 (as previously reported, there were 12 DXpeditions on the bands on one particular day) and so few during the spring and summer of 2014, that it would seem to make sense to have some sort of coordination. I'm aware that part of the reason for the dearth of summertime (northern hemisphere summer of course) activations is perhaps related to the fact that the greyline openings don't fall in our favour. So we have to dig out the DX at times which might be awkward to our working or social schedules!! I don't know about you, but with a full-time day job I find it difficult to stay up until 2am or 3am to catch the west coast openings!



Declan Craig EI6FR, EJ7NET DXpedition leader, co-ordinating installation of antennas for the Cape Clear activation.

It's typical of summertime, especially when there's any pick-up in the weather at all, that many hams leave the shack to engage in other outdoor pursuits. This is perfectly normal. There is life beyond the shack door! Some of this "extra-curricular" activity might involve antenna work, and after a bruising winter of wind storms, many of you had work to do on that front. Of course, the most dedicated DXers would suggest that you must be at the radio at all times. They say working DX is not a life or death thing . . . It's far more serious!!

I've only worked one new DXCC since I wrote in April. But I suppose that, with 306 out of 340 DXCCs worked, that might not be unusual. The rate of new ones slows down enormously when you hit the 300 mark! That DXCC was Western Sahara, which was activated on SSB for a couple of months by the Sahrawi Amateur Radio Union station under the callsign S01WS. There are a number of EI calls in the online log, which can be viewed on Club Log, although there isn't a league table so you have to look up each callsign individually by searching for it. Congratulations to Dave EI9FBB and John EI7BA (and any others that I missed) who both worked S01WS on 6 metres. John also worked them on 60 metres. Well done.

The rest of my summertime activity has amounted to what I call "filling out slots", working stations on bands and modes where I don't have a particular DX. I found out to my astonishment one day that I didn't have Spain worked at all on 15 metres SSB. I couldn't believe it! My first QSO on HF when I got my licence in 2009 was with a Spanish station. Echo Alpha is very active, and easy to work from Ireland. I don't know how 21 MHz phone managed to slip through the net, but I suppose it's difficult to keep an eye on everything. That's where my new logging software, Logger32, has helped enormously, but more about that in a moment. Just when I realised I didn't have Spain on 15m, there was a Spanish contest on, so I worked six or seven Spanish contest stations in a row, knowing that many contest stations upload to Logbook of the World afterwards, and pretty soon I had the slot filled and confirmed. Happy days.



Logger32

A few months ago I got a desktop computer for the shack. I had been running all my software for ham radio and photography and video editing and all the other things I do off an eight-year-old Acer laptop. It was beginning to tell me "I'm getting old. I need a break!" The desktop PC is a refurbished Dell XPS model, with a beautiful large monitor with built-in surround sound speakers. It's a joy to use, and the old laptop is finally getting a rest!

When I got the "new" PC, I took a decision to try out some other logging software. Several DXer friends suggested I download and try out Logger32, which is a free programme and apparently packed with features. So I downloaded it and installed it, and tried it out. I kept running my old log on LOGic8 on the laptop in the meantime. When I familiarised myself with Logger32 enough, and when I had rearranged the windows and the column displays to suit, I finally took the plunge and migrated my log of almost 20,000 QSOs (four and a half years' work) from the laptop. I will admit that it took a



Liam EI7DSB celebrates after making his first QSO on the JT65 digital mode as EJ7NET. We had a station dedicated to digital modes and made several JT65 QSOs in addition to some PSK and RTTY

while to get the new log to accurately tally my DXCC count. Several rare DXCCs were in under the wrong designator, and so I was a few DXCC short of the expected total. But once I found the offending QSOs, and corrected them, all was well.

I have really enjoyed using Logger32, although there are many of its features with which I am not yet familiar. It's been really easy to use, and compared with LOGic8 on the laptop, it seems much more stable. LOGic8 had a habit of crashing, with a series of errors, and it could take a while to get it working normally again. That hasn't happened yet with Logger32 (he says, touching wood while typing!)

One of the wonderful features of Logger32 is the DX Spots window, which shows DX in different colours to denote whether you need it or not. A red bar means it's an ATNO - All Time New One. A blue bar means it would be a new one on that band. A green bar means a new band slot. And so on. You have to connect to the cluster through Logger32 by typing your callsign - and it's a pity that all clusters don't require callsigns and passwords, but more about that anon. The colour-coding keeps you alert to DXCC that you need, and that's one of the reasons I really love Logger32. It has the



Moonrise on Cape Clear ... this was our QTH for the duration of our activity as EJ7NET

Worked/Confirmed window also, showing which slots you have worked or confirmed. LOGic8 also had this, and it's a vital feature for any serious DXer who is interested in filling out band slots. Admittedly, some operators are happy just to work and confirm a DXCC on any band or mode, but a lot of us like to fill out the slots.

Abuse of clusters

I think it's high time that all of the DX clusters introduced a full login feature, with callsign and password, as a move that might go towards stemming the tide of abusive comments on what is supposed to be a useful and helpful tool for the radio amateur. Some people use the cluster as a means of complaining about not receiving a QSL card from another ham. They will spot that ham's callsign and some abusive comment about that ham being only a "dollar hunter". While they might be rightly frustrated, the cluster is not the forum on which to express displeasure about this. Besides, there might be a very genuine reason the QSL card hasn't been either sent or received. But the ham on the receiving end of the abuse effectively has his name blackened - which those of us in the journalism industry refer to as defamation of character - and has a limited capacity to defend him or herself once the allegation has been made.

The arrival of a certain Sicilian operator onto the "DX frequency" on 14.195 seems to provoke an absolute torrent of disgust and derogatory comments on the cluster, each and every time he operates there. I know everyone has their own opinion about whether he should or should not operate there, but do the clusters really need to degenerate into a puerile and often quite disgusting outpouring of anger and insult? There have been some quite disturbing and sinister comments, the sort of stuff that leaves one wondering what sort of people inhabit the world of amateur radio. Hopefully these are in a small minority. Ironically, many of those who complain about this operator making QRM on the DX frequency then try to "jam" him, whether with their own voices calling for him to QSY, or with other jamming signals which include recordings of the man himself or even sometimes music. Anyone listening to this behaviour might, whether rightly or wrongly, form the opinion that the amateur radio world is full of madmen.

There was a flurry of abuse and allegations directed towards an Irish ham a number of months ago on the cluster. Suffice to say I will not be repeating the nature of the abuse here, and

I think the question of whether a particular allegation is true does not matter in the context of this discussion. The fact remains that there are several things which are very wrong about this type of activity:

It is ungentlemanly, and against the basic tenets and aims of amateur radio.

Only a coward and/or a psychopath will hide behind some false callsign and make serious allegations about another person.

As stated above, the DX clusters are NOT the forum in which to address such issues.

Such action causes the victim's character to be defamed. Thus the victim might be in a position where they might need to consider taking legal action, to defend their good name. Is this something we want in ham radio?

Such behaviour diminishes the usefulness and viability of the web-based clusters, the general purpose of which is to show where DX can be worked on the bands.

Most of all, such activity brings the whole hobby into disrepute. The vast majority of radio hams are decent folk, but sometimes the 1% can spoil it for everyone.

I'd like to hear your comments and feelings about this. Should there be much stricter login/security measures on the cluster to stem this type of activity? Email me on hamradioireland@gmail.com and I will return to this subject in a future article if necessary.

EJ7NET

I had the pleasure of being part of an IOTA expedition to Cape Clear Island (EU-121) with the EJ7NET team in July. It was my second such trip, following on from our visit to Inis Mór on the Aran Islands last year. We had a smaller team this time, and band conditions were unfortunately unfavourable much of the time. But as you can imagine, that did not prevent us from having a good time!

The team, led by Declan Craig EI6FR, included Liam EI7DSB, Tony EI3HA, Rolf HB9DGV, Bernie HB9ASZ and this correspondent. The boat trip from Baltimore, Co. Cork, takes about an hour to get to the island. We stayed in a very nice house overlooking the Atlantic on the northern slopes of the island. Take-off was good to the Pacific, Japan, the USA and the Caribbean, and was good for most of Europe except the south, mainly towards Spain.

We used multi-band wire verticals, one for the WARC bands (12, 17 and 30m) and one for the main bands (10, 15, 20 and 40m), an M0CVO off-centre-fed dipole and an inverted V. We also decided to maintain a station for 6m (50Mhz). We used a small two-element beam for that and my FT897.

Unfortunately, as I said, conditions were not great. The high bands were closed throughout, and we made only one QSO each on 10m and 12m. 15 metres was poor, and even 17 metres was a struggle at times. Regrettably, there wasn't a single good opening on 6m, although several QSOs were made. There was more activity than expected on the lower bands, particularly 30m and 40m. Some good runs into Ireland and the UK were made on 40m SSB.

But the lack of conditions did not prevent us from having a



Rolf HB9DGV activating Cnoc Cairntín, the highest point on Cape Clear Island, as EJ7NET/P for the Summits on the Air (SOTA) programme. He made several trips and made over 100 QSOs

very enjoyable time. There was still time for sightseeing, and I took the opportunity to visit some ancient megalithic remains on Cape Clear. Rolf HB9DGV, who is our QSL manager, made several trips to the highest point on the island, a hill behind our QTH, called Cnoc Cairntín, for the purpose of activating it for SOTA (Summits On The Air). This activity proved to be very successful and rewarding.

Our stay was a very comfortable one, not least because of the fine property we stayed in, but also because of the excellent food that was prepared for us each day by our chef, Tony Casey EI3HA. Thanks a million Tony.

The QSL card for the activation is shown here. If you made a QSO and wish to receive a card, QSL via HB9DGV. Thanks to all who made it into the log. We logged a total of 86 EI callsigns. Despite conditions, we did manage some DX, including a QSO with TZ6BB in Mali, one with Colombia, a couple of dozen into Japan, one with RI1ANT in Antarctica, and three QSOs with New Zealand.

RECENT DX

This won't be a long section, partly because of the serious dearth of DXpeditions during the summer, but mostly because of my own lack of activity in the past couple of months.

FY French Guiana

Some time ago, I met Alain F8FUA through our mutual friend, Doug EI2CN, and have met him a couple of times since. Alain is a seasoned DXpeditioner (if such a word exists!) and probably his best well-known activation was in Niger with the callsign 5U7NU in 1989. Niger had not been on the air in years, and Alain worked sustained pile-ups during his time there.

Last May, I had the pleasure of working Alain, and his friend Stefan F5UOW, as they activated FY French Guiana in a mini DXpedition over 11 days. I worked them a total of six times, on four CW slots and two SSB slots. It was unusual to hear a friend (other than an EI) working a pile-up with a DXpedition, and of course when I called Alain gave me a few minutes to have a quick chat, which was a great pleasure

(although I didn't take up much time being conscious of all the other patient hams waiting to call him). Recently I had the pleasure of meeting Alain again, at the QTH of Doug EI2CN, and on this visit Alain had QSL cards confirming our QSOs to give to me. See photo.

S0 Western Sahara

As mentioned, I finally got the opportunity to log an African DXCC that had eluded me since I started DXing at the end of 2009. S0, Western Sahara, became active in late May under the callsign S01WS and I managed the first of five QSOs on May 25th, followed by several more during the following fortnight. I now only need to work one more African country – E3 Eritrea. I have worked every other country on the African continent. Incidentally, if you worked S01WS, you can check if you are in the log online at <https://secure.clublog.org/logsearch/S01WS>

FORTHCOMING DX AND ACTIVATIONS

ZK2 Niue

Maurice ZL2MF will be active from Niue island in the South Pacific as E6MF between September 2nd and 9th. He will be QRV mainly on 20m SSB, but will also try 40, 15 and 10m. QSL via his home call.

ZL7 Chatham Islands

Four Japanese hams will activate ZL7 Chatham Islands off New Zealand between September 11th and 16th. They will be QRV on all bands from 160m through 6m, and QSL will be via JA0VSH (Direct/bureau) and also via LoTW.

VQ9 Chagos Is.

N7XR will be active from Diego Garcia as VQ9XR until September 15th. Hopefully you will get a chance to work him. He will be on all bands. QSL via NN1N and Logbook of the World.

A5 Bhutan

Pekka OH2YY will be active from the Kingdom of Bhutan as A52YY between September 26th and October 2nd. He will have good take-off to Europe. He will be QRV on 40m through 10m on SSB only. QSL via home call and LoTW.

T30 Western Kiribati

A group of German hams will activate Western Kiribati using the callsign T30D from October 2nd to 15th. QSL via DL4SVA, OQRS and Logbook of the World.

YJ Vanuatu

Four New Zealand operators will activate Vanuatu using the callsign YJ0X from October 8th to 15th. QSL via ZL3PAH, OQRS and LoTW.



Anthony EI2KC receives QSL cards for the FY French Guiana DXpedition from Alain F8FUA, one of the operators, at the shack of Doug EI2CN (centre), who was hosting Alain for a few days

ZK3 Tokelau

SP5EAQ and SP5ES will be active from Tokelau from October 8th to 29th as ZK3Q and ZK3E. They will operate SSB and CW modes. Their callsigns are pending. More information about this activity is available on the web at <http://zk3.sp5drh.com/>

VK9X Christmas Island

Eight Polish ops will activate Christmas Island (VK9X) as VK9XSP from October 18th to 31st. QSL via SP6IXF and LoTW.

KH8 American Samoa

There will be two separate activations of KH8 in October and November. The first will be by JH3PRR operating as KH8B from October 21th to 27th, and the second will see the W1AW (100th anniversary of the ARRL) special callsign operate from American Samoa with the callsign W1AW/KH8 from November 5th to 18th. See you in the pile-ups!!

VK9L Lord Howe

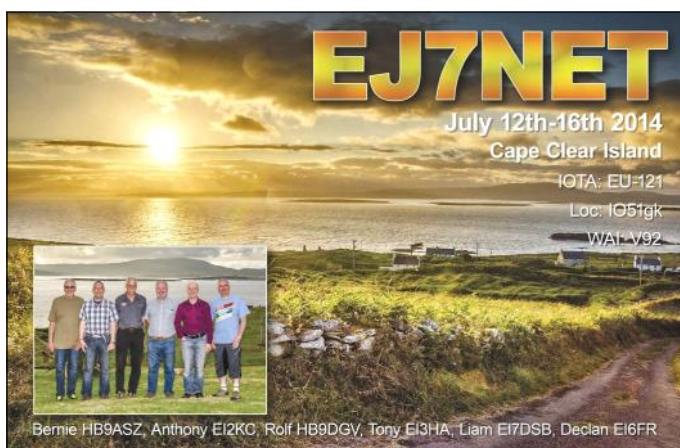
A big multinational group will be active from Lord Howe Island in the Pacific Ocean off the eastern coast of Australia from October 13th to 29th using the callsign VK9DLX.

FR/T Tromelin

The ninth most-wanted DXCC according to Club Log, Tromelin island in the Indian Ocean will be activated by a team of just six operators using the callsign FT4TA from October 30th to November 10th. This will be a brand new DXCC for many of you, except those who were licenced in 2000 which was the last time this DXCC was on air. Tromelin is difficult to access. There is no harbour, and landing will be made on a one-kilometre runway which is almost the whole length of the island! If you wish to learn more about this exciting DXpedition in the meantime, visit their website at www.tromelin2014.com/en/

T31 Central Kiribati

A big multinational team will activate Central Kiribati with five stations on the air under the callsign T31R from November 1st to 30th. Central Kiribati is the 29th most wanted DXCC according to Club Log, and it would certainly be a new DXCC for me if I can work it.



FK/C Chesterfield Island

Another new one would be Chesterfield Island, which will be activated by Michael FK8IK during an island-hopping adventure in November. He hopes to activate Chesterfield using the callsign TX5C between November 5th and 9th. He also plans to visit D'Entrecasteaux Reefs OC-058 as TX5E from November 14th to 17th and Belep Islands OC-079 as TX5B from November 21st to 24th. Sounds like exciting stuff, but given its location and the fact that he is a one-man operation, it might well prove difficult for us EIs to get into the log. But that certainly won't stop us from trying!

VU4 Andaman & Nicobar Islands

A team of ten operators led by Krish W4VKU will be activating Andaman (IOTA AS-001) and Nicobar (AS-033) some time during November. The team is the same one that activated Lakshadweep Islands in 2013 as VU7AG. The callsign for the latest dxpedition will be VU4KV. Final dates will be announced on their website when all details are confirmed here - www.vu4kv.info

Asian tour

Toshi, JA8BMK, has announced that he will return and activate the following DXCC entities on a 160m and 80m DXpedition. Days are not finalized: October - Nepal and callsign 9N7BM. He states that he will set up a vertical instead of an inverted V, with RX antennas. November - Laos and callsign XW8BM. Activity will be from a new QTH, with lower noise and a wider area for RX antennas. November and December - Vietnam and callsign XV7BM. He will have improved RX antennas.

I've tried to cover everything, so hopefully I haven't missed anything important. It looks like after a fairly quiet summer it's going to be a hectic early winter for DXers. Make sure you have your antennas in good shape and hopefully we'll hear each other in the pile-ups!

As usual, thanks to the many sources of DX news for this article, including the OPDX bulletin, www.dx-world.net, DX Coffee and DX Italia by I2MQP.

Slán go fóil,
Anthony EI2KC

Mayo Radio Experimenters Network

Annual Rally

Welcome Inn Hotel Castlebar

**Sunday
12th October 2014**

*For further details please contact the rally director,
Padraic EI9JA
on 087 695 7154*

Call book address withheld?

It can be useful, at times, to know the QTH of a transmitter - for example while carrying out antenna experiments or investigating propagation. However, some licence holders have opted to withhold their address from published call books, and it has been suggested to us that it would help with antenna and propagation experiments if the townland and county of these licence holders was made available. Licence holders with address details withheld who wish to provide some guidance to their approximate QTH can arrange to have summary address details included in published call listings: please contact Joe Ryan EI7GY memrecords@irts.ie with any such changes.

Shannon Basin Radio Club

The SBRC took part in the Summer 80m counties contest from Sliabh an Iarann in Co. Leitrim. The antenna was a dipole, and 100w from an IC7400.



Fergus EI6IB

Attention Club Secretaries

Is your club listing on the IRTS website up to date? Check www.irts.ie/clubs and email pagemaster@irts.ie with any changes you want to make. It is important that prospective members and visitors can obtain contact and meeting information.

Kerry Amateur Radio Group

Kerry Amateur Radio Group (KARG) are pleased to announce that they have been issued with an additional callsign, EI1K.

The club intend to use the callsign EI1K for contest operating, while the callsign EI1KARG will continue to be used for club field day operations and special event stations.

The Kerry Amateur Radio Group have a qrz.com page for the callsign EI1K where photographs of their various activities and details of the club can be found.

Co-options to the Committee

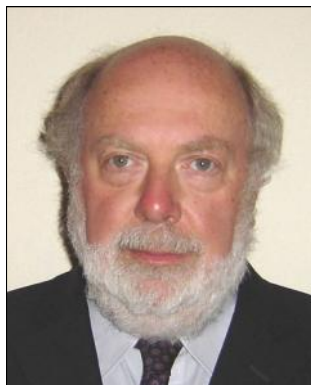
As provided in Rule 10.2 of the Society's Constitution and Rules (which may be downloaded from www.irts.ie/downloads), the Committee has co-opted Gerry Gervin EI8CC and Dave Court EI3IO as members of the Committee. With the earlier co-option of Thos Caffrey EI2DJ this brings the co-options under Rule 10.2 to the permitted limit of three.

Gerry EI8CC is no stranger to IRTS Committee work having previously served as Secretary. During his term as Irish Ambassador in Lesotho Gerry operated as 7P8CC and facilitated operations there by Aidan EI8CE (7P8AM), Peter EI7CC (7P8PB) and Séamus EI8BP (7P8BP). Gerry was first Director General of Civil Defence and helped to promote the cause of emergency communications by amateurs.



Dave Court EI3IO has operated as G3SDL, OZ3SDL and A92IO to mention just a few! Dave has been involved professionally in spectrum management issues throughout the world.

A holder of many "firsts" on 50Mhz and 70 MHz Dave is supporting IRTS and IARU in the initiative to acquire a Region 1 wide allocation on 70 MHz.



IRTS Sub-Committees

The IRTS Website now shows the *Terms of Reference* of the Society's active sub-committees / working groups and their membership. The page can be accessed from the "IRTS Sub-Committees and Working Groups" button on the right of the home page. Anyone wishing to contribute to the work of these groups, or make suggestions relating to their activities, should contact the relevant group Chair by clicking on the call sign link on the page. Contributions are most welcome.

UKEICC 80m Contests

In the previous issue of Echo Ireland, we reported on the formation of the UK and Ireland Contest Club - set up to encourage contesting with EI and UK entrants competing on an equal footing.

These single-op **80m** contests begin in September - each event starts at 2000 UTC and runs for 1 hour, with entries to be uploaded within the next hour (by 2200 UTC) Results will be posted within 12 hours - on the Thursday morning.

CW - Wednesday 24th September

SSB - Wednesday 22nd October

CW - Wednesday 26th November

The exchange is your 4-character grid e.g. IO63 - no RSTs

Rules at **www.ukeicc.com**

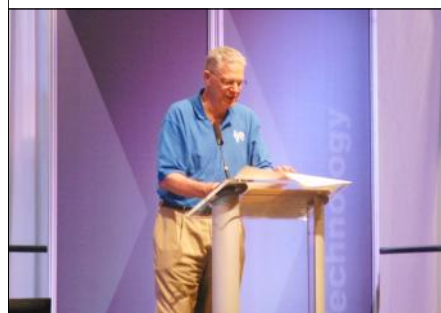
There are **HP**, **LP** (100w) and **QRP** (5w) sections, each with **Connected** and **Unconnected** Categories - you're "Connected"

An Rás Mór 2014



AREN Members Mick, Gary, Matthew, Conor (EI4JN), John (EI7IG), John (EI8JA), Harley

Joe Taylor W1JT at ARRL 100



IOTA 2014



Shannon Basin Radio Club on Inisboffin
Niall EI4CF, Enda EI2II, Pat EI9HX

ARRL 100



IRTS President Séamus EI8BP
RSBG President John G3WKL

Tipperary Amateur Radio Group

The Spring/Summer period of 2014 has been a busy one for members of the TARG. During the Spring leg of the IRTS 2m Counties Contest, Tommy EI2IT operated the club station EI7T/P from near Cahir in Co Tipperary. Club members Eddie EI3FFB, Hugh EI2HI and Paul EI3ENB also participated in this contest giving out points for multipliers in Counties Tipperary and Kilkenny.

On Sunday the 18th of May 2014, Paul EI3ENB operated the club Station EI7T/P from his home location in Co Kilkenny for the 40 Metre Counties Contest where he made over 60 contacts. Paul also took part in the Practical Wireless VHF QRP Contest on Sunday the 15th of June 2014 using his own callsign EI3ENB/P in Glenmore, Co. Kilkenny running just 3watts. His best contact was into IO92 square.

On Sunday the 22nd of June 2014, John EI7IG, Eoghan SWL (now EI5HBB) and Paul EI3ENB operated the club callsign for the 80 Metre Counties Contest. On the 5th July 2014 club members operated EI7T/P from Mullinavat, Co Kilkenny (IO62JI square) for the VHF/UHF Field Day. Weather conditions and equipment problems restricted operating to 2 metres only.

Plans are already in place for club participation in the upcoming 2 metres Counties Contest and SSB Field Day in September.

On the June Bank Holiday weekend members of TARG assisted the organisers of the Aherlow Walking Festival. This is an annual event that attracts a large number of hillwalkers from all over Ireland who climb the Galtee Mountains over the three days of the holiday weekend. Paul EI3ENB, Eddie EI3FFB, Tommy EI2IT and Denny O'Dwyer SWL assisted the organisers by providing communication for this various grades of walks during this event.

And finally congratulations to Eoghan Kinane who recently passed the Radio Theory Exam and has been issued the callsign EI5HBB.



Eoghan EI5HBB, John EI7IG and Paul EI3ENB operating the TARG club station in 80m Contest 2014



TARG members taking part in 80m Contest June 2014



Paul EI3ENB during PW Contest 2014

Sligo Amateur Radio Club Voice Repeater EI2TKR

Sligo Amateur Radio Club is pleased to announce that a new 2 metre voice repeater (**EI2TKR**) has been installed back on Truskmore Mountain in Co Sligo (**IO54TI**).

Channel	RV56 (R4)
Output Frequency	145.700 MHz
Input Frequency	145.100 MHz
CTCSS Only	77 Hz

As a new antenna location is being used the club would appreciate signal reports and these can be sent to **EI7CS** or **EI8BEB**.

Are you receiving EiNews?

EiNews is the monthly electronic publication from IRTS. If you have not already done so, send a request to **memrecords@irts.ie** to receive it by email at the beginning of each month.

RSGB VHF Field Day 2014

EI9E/P is again at the top of the list in the RSGB VHF National Field Day.

VHF Field Day is taken very seriously by the group that comprises the Wexford VHF Group, the East Cork Radio Group and Network Southern Area Radio Experimenters' Group who have been collaborating for many years on this major logistical exercise. To get to the top and more importantly to stay on top and ahead of the competition requires a process of continual improvement.

Billy McLoughlin EI7FJ has an unbroken record in 32 years of competing in this event. This year's improvements were again all down to Billy. He persuaded his companion Janet to come to the mountain and she kept us supplied with the most delicious Bakewell puddings and apple tarts straight from the oven. This made all the difference to the morale and well-being of the team and kept spirits high when the radio conditions were disappointing. While we have dined on similar delicacies before including mini Bakewell tarts, they have never been cooked freshly on site and served straight from the oven—another significant step forward for the group!

EI9E/P was the highest scoring station in the 6m and 4m sections and the team was delighted to be the highest overall scoring station in the Open section of the contest. While the group is not eligible for trophies in this UK contest, it is happy to be measured against and to compete directly with the leading UK stations.

de John EI2FG

Opposite: Billy EI7FJ waits for Janet's pudding!

Collection of Solar Data

Solar data is now being collected by the Rosse Solar-Terrestrial Observatory at Birr Castle:

While it would of course be extremely useful to have access to solar data collected on our doorstep (and I for one would encourage those involved to make that data widely available), I would highlight that it is also useful (some might argue more useful if you are actually on the radio at the time) to have at your disposal real time locally originated signal reports from e.g. the NCDXF Beacon network.
<http://www.ncdxf.org/pages/beacons.html>

There are three island of Ireland based NCDXF beacon monitoring stations listed at <http://www.ncdxf.org/beacon/monitors.html>, of which I believe mine is the only one currently active. I've been monitoring the NDCXF beacons continuously for over a year now from my QTH in Cobh (IO51uu) and that data is available to all amateurs who might wish to use it. Data and full details on the setup are available at <http://86.43.106.118/ei4hq/faros/> I've found this to be an immensely useful information source that has significantly improved my understanding of HF propagation *as we experience it here in Ireland*, and it is a great aid for quickly getting up to speed on what propagation has been doing and is currently doing for someone who is unable to get on air very regularly for whatever reason.

There are of course other real time propagation indicator tools such as the WSPR network (<http://wsprnet.org/drupal/wsprnet/map>) though personally I find the NCDXF beacon network to have more utility i.e. to be a better indicator of likelihood of a successful contact, at least when working SSB or CW.

Lastly, I'd just mention that a propagation path between two locations is only one third of the story - you also need a ham at either end, so I'd encourage everyone to get on the air whenever you can!

de Cormac EI4HQ

**Please send your input for Echo Ireland
to
newsteam@irts.ie**



VHF/UHF Field Day July 2014



EI1E/P

This was the first VHF/UHF Field Day outing for EI1E. The stations were active on 4 bands—6m, 4m, 2m & 70cm. Conditions were not favourable. The longest QSO was to SP9FY at JN99MS on 6m, on a homebrew 5-element beam.

More EI stations need to switch on and give a call to keep these events alive!

de EI1E

CW Field Day 2014

Reports were received from Avondhu Radio Club EI1E/P and from Joe Ryan EI7GY. *Thank you!*

EI1E/P wrote:

The weather forecast for the weekend was not good. However, we proceeded with plans on activation of Caherdrinna Castle (IO52uf), Kilworth, Co. Cork. Our hosts, the Rea family welcomed us back with pleasure.

The landowners were intrigued with our installation and purpose, the last time we were on site. Unfortunately, the weather was so bad back in 2012, the younger members of the farm did not get to see operations. This time round, there was an opportunity to show the station and explain its details.

Wind, rain...tent slapping off your neck while you try to pull the serial no. of that QSO out of the QRM!

We logged a few EI stations, EI3Z/P, EI3KG, EI6AK and F/EI3DP.

Bands were poor. We expected to log twice the number of QSO's. Only one Japanese. By Sunday morning at 11am, we decided to pack it in, a few hours before official finish.

Our antennas were, doublet, 80m inverted V, 40m inverted V. The Spiderbeam did not make it out of the box; this was a major loss to our effort. Only for our BOG, we would have only half the contacts on the low bands.

On reflection, maybe a more sheltered spot next time ...

de 1E

EI7GY wrote:

We heard only two EI portable stations operating in last weekend's CW Field Day: Avondhu Radio Club operated from a tent at Caherdrinna Castle, just west of the Glocca Maura, in County Cork, and kept going despite torrential rain and strong gales, while Shannon Basin Radio Club was at its usual QTH in Ballinasloe, County Galway and experienced somewhat better weather.

Both stations report that band conditions were generally disappointing, although there were some brief openings on 10 metres on Saturday and Sunday. While the focus in this contest is on working other portable stations in Europe, QSOs with DX stations are also welcome: the Shannon Basin group had a good run on 15 metres on both days, attracting some DX callers including VK (Australia) and VP8 (Falkland Islands). ...73 7GY



Caherdrinna Castle



Windswept Tent EI1E/P CW Field Day 2014

CQWW SSB Contest 2013 EI Certificate Winners

In the June 2014 edition of Echo Ireland we neglected to mention that Doug EI2CN was #1 in EI, #7 in Europe and #10 in the world in the 10m SSB HP single operator assisted category with a score of 1,029,076 points.

Congratulations Doug!



Are You Going to Kilkenny???
IRTS 83rd Dinner, AGM & Radio Rally
Hosted by the
South Eastern Amateur Radio Group
Hotel Kilkenny, College Road,
Kilkenny
Saturday & Sunday
25 / 26 April 2015



An experimental dipole for 6m and 4m

Filip (Phil) Register ON4TA

As a regular visitor to Ireland I enjoy making contacts on 4m [and 6m] from mobile and portable set-up. For my hill top /P operation I use wire antennas e.g. a 4m SlimJim and a 6m Delta Loop, in vertical polarization for FM contacts.

Many stations I talk to lack a vertical antenna for 6m as such the FM section of that band remains underused.

It is often difficult to erect two vertical antennas (needing two masts or supports) or run separate coax cables so what if 6m and 4m were possible with just one antenna?

A few years ago I was into beacon reception in the Low VHF spectrum between 40MHz and 60MHz and started looking for an antenna for that frequency segment. A broad band dipole in horizontal polarization would have been ideal, however, no design would easily span 40-60MHz, possibly stretching to 70MHz. I experimented with a set of mono-band dipoles for 40/50/60/70MHz but this was a rather impractical setup and still required switching.

Further experiments led to a *coupled* dipole centered on the in-between frequencies of 45MHz and 65MHz, which gave acceptable results for RX on 40/50/60/70MHz. I was not too bothered about antenna VSWR since I would not transmit on it. I mounted the antenna on the gable wall in horizontal polarisation and it served me well for beacon reception for a couple of Sporadic-E seasons.

In spring 2014 I started adapting the prototype and re-centered the dipoles on 50MHz and 70MHz so that the antenna could be used for receive and transmit on the 6m and 4m bands. I also planned to mount the antenna in vertical polarization as I am using the FM segment of each band for local QSO's.

The resulting "AXD-6-4" is the product of software simulation and on site experiments, it is a vertical omnidirectional dipole for the 6m and 4m bands, an antenna without traps or loading coils, having a feed point impedance of around 50 Ohms.

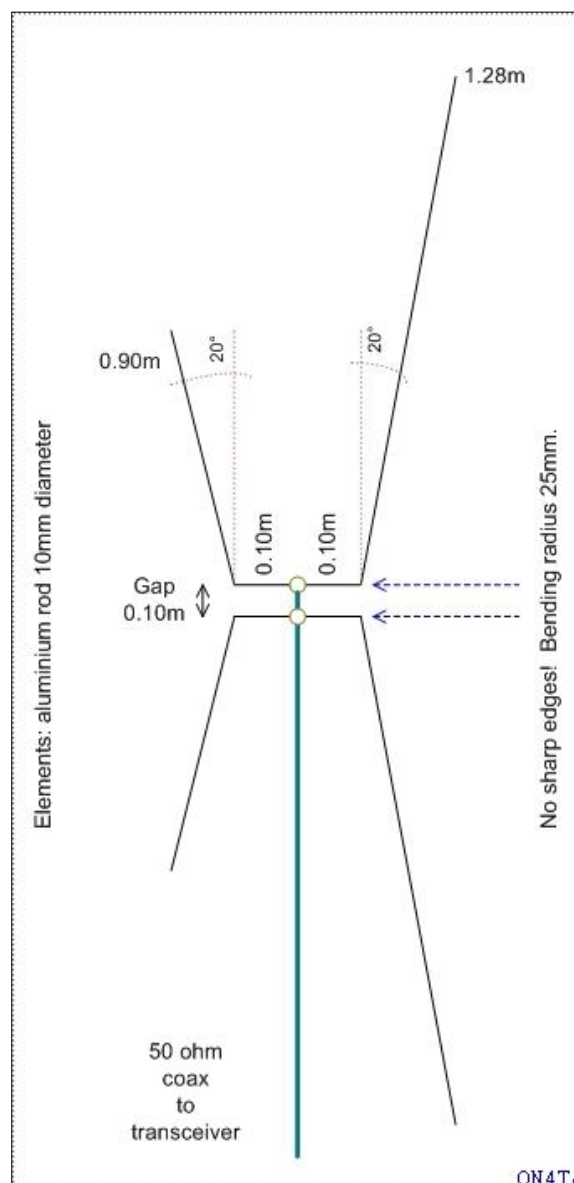
This antenna will permit users of modern multi-band transceivers e.g. ICOM IC-7100 or ex-military FM transceivers e.g. PRC351 to use 6m/4m FM for local QSOs



The prototype centred on 45/65MHz, above a 4m quarter wave GP

without the need for mounting multiple verticals and switching antennas.

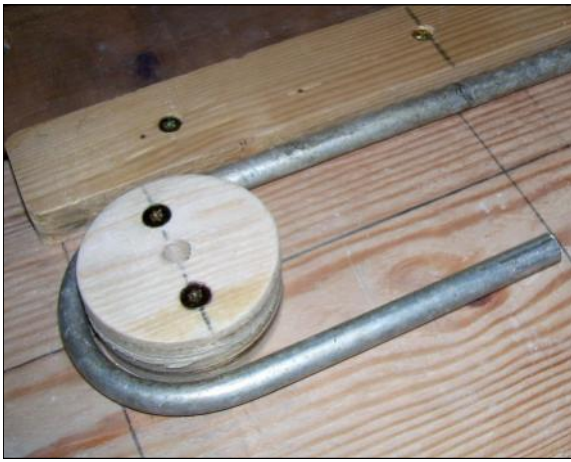
Diagram



Construction

The antenna elements are 10x1.0mm aluminium tubing. For reasons of mechanical strength I bent each dipole element by hand out of a standard industrial length [6m], trimming the element ends to the desired length. The angle of the elements is approximately 20 degrees from vertical (Z axis).

Do not try to bend aluminium tubes without some form of support! Several years ago I made a simple jig to construct folded dipoles. It consists of a 50mm cut-out (bending radius 25mm) and two straight sections to firmly hold the aluminium tube, using a solid wooden support as base. I used the same jig to gently bend the aluminium tubing for this antenna to 20 degrees. The bent section will add approximately 40mm to the overall element length. The lengths in the above diagram are correct for the straight sections.



A simple jig to bend 10mm aluminium tubing (on this photo a folded dipole)

On my earlier antenna I connected the coax cable directly to the feed point, however, this proved impractical as the antenna with cable attached had to be mounted and dismantled several times. I changed that and left a length of 30cm coax attached to the feed point, terminating the coax with an N-connector. I use a coax patch cable from the antenna to an N-N flange connector on the gable wall.

For testing purposes I fixed two 25mm PE brackets to the multiplex so that the fibre test mast would not be damaged. For a permanent set-up metal U-clamps can be used.

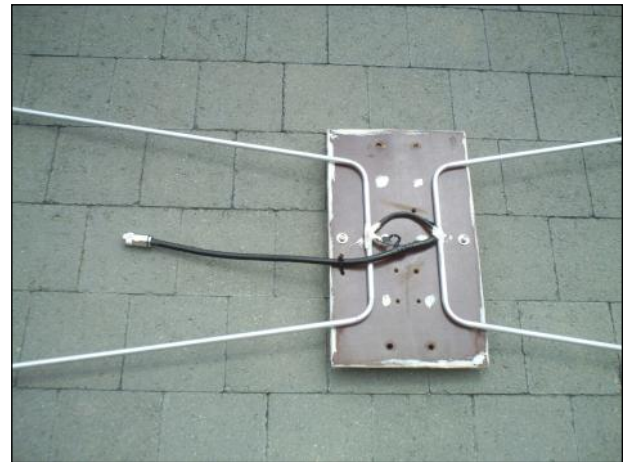
The dipole/coax feed point as well as the edges of the multiplex board have been treated with a neutral silicone compound for long term resistance to moisture.

The prototype uses a moisture resistant multiplex (about 20x30cm, dimensions uncritical) which eventually will be replaced by a PE (polyethylene) off-cut. Fit plastic end caps to stop water running into the tubing.

I used 10x1.0mm aluminium tubing which proved all right for the prototype antenna. For the more windy Irish WX



The prototype antenna prior to testing



Close-up of the board and coax attachment

conditions you may consider increasing the wall thickness for greater mechanical strength e.g. 10x1.5mm or 10x2.0mm. Remember: if you also increase the tubing diameter, element lengths will need changing too.

DIY stores are unlikely to stock “industrial” 6m lengths, however, check with builder’s merchants as they usually have large diameter aluminium tubing in stock and should be able to order smaller diameter tubing from the same supplier.

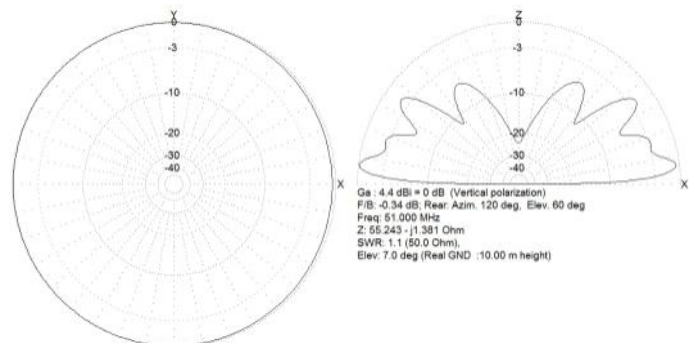
Simulation

MMANA-GAL is free analyzing software using Method of Moments modeling, allowing to model certain characteristics of an antenna e.g. far field plot in horizontal or vertical polarization, f/b ratio, antenna gain, feed point impedance, etc.

As input you provide the type of material, element lengths, diameters, distances, etc. and the software will calculate above characteristics for a chosen frequency [range]. The antenna can be modeled in “free space” or at a specified distance above ground level.

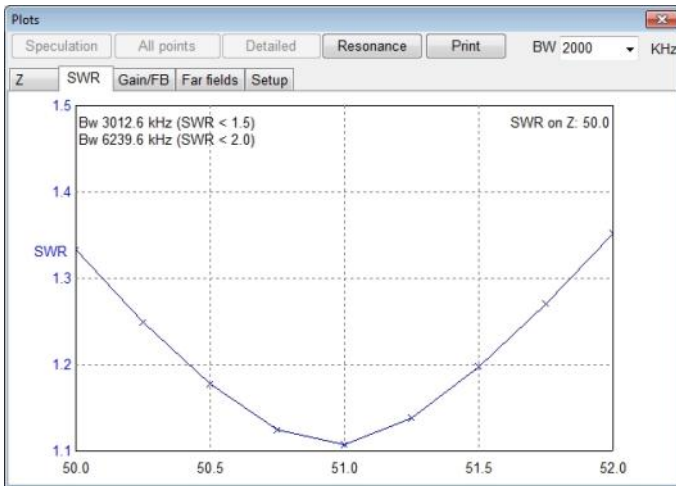
Below examples depict the simulated far field pattern and simulated SWR curve for the AXD-6-4 dual-band dipole antenna.

AXD-6-4: characteristics for the 6m band with the dipole mounted at 10m agl.



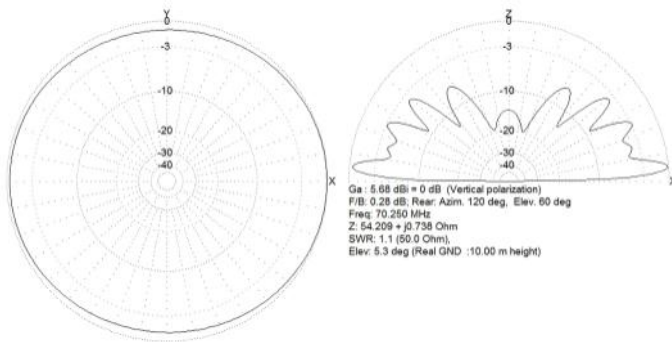
The 6m dipole has been centered on 51MHz, the FM segment is around 51.500MHz. The antenna is almost perfectly omnidirectional and very little energy is being wasted upwardly. An elevation angle of 7 degrees appears to be realistic for a height of 10m agl.

AXD-6-4: simulated SWR curve for the 6m band for a $Z=50$ Ohm feed point.



AXD-6-4: characteristics for the 4m band with the dipole mounted at 10m agl.

The omni-directional plot appears slightly flattened by 1dB at 0/180 degrees, in practice you might not even notice this. Little energy is being wasted upwardly. An elevation angle of 5 degrees appears to be realistic for an antenna height of 10m agl.

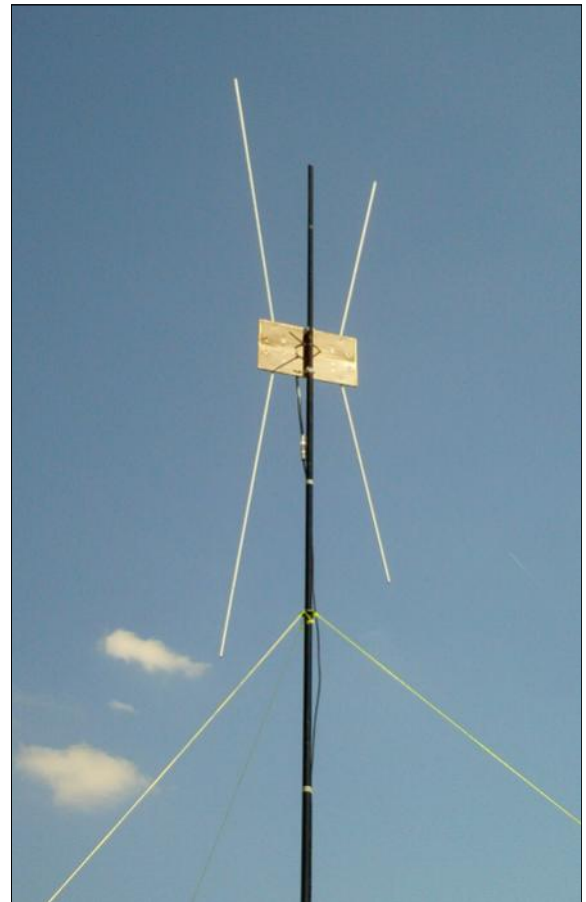


AXD-6-4: simulated SWR for the 4m band for a $Z=50$ Ohm feed point.



Measurements

Measurements were made with an HP 8711A Network Analyser with the antenna mounted at 6m agl on a fibre mast free standing in the garden.

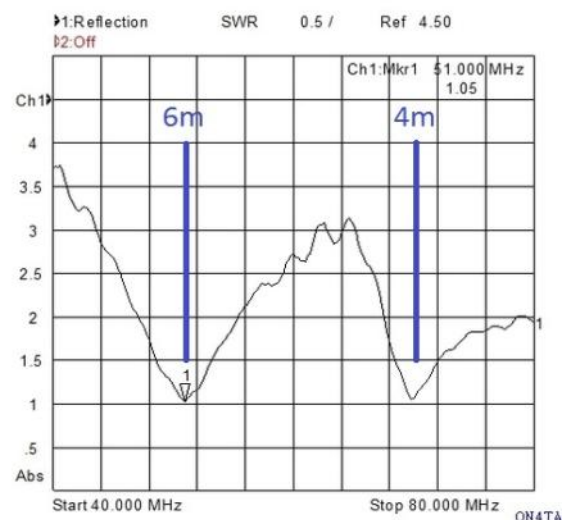


The experimental dual-band dipole on a test mast ready for measurements

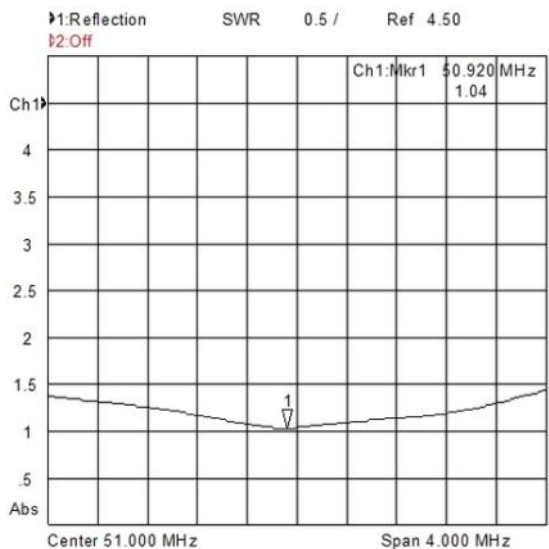
I first mounted the original prototype (45/65MHz) and measured its characteristics, which I entered as base parameters on the analyser. Both dipoles were “long” so there followed a short cycle of shortening the antenna elements whilst continuing making measurements on the analyser.

I noticed a slight mutual coupling and made adjustments to the dipole for the lowest frequency band first. With both dipoles close to their desired frequency (51.5MHz and 70.25MHz) I shortened the element lengths by 5mm at a time. The results are shown in the graphs below.

SWR curve for the Low VHF spectrum 40-80MHz indicating low SWR on 6m and 4m bands.



Detailed SWR curve for the 6m band.

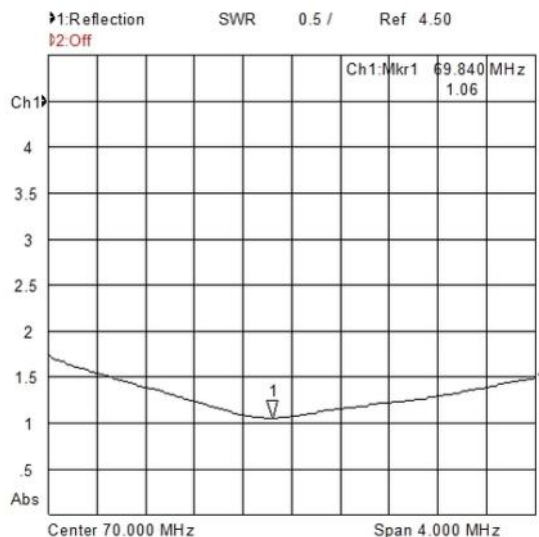


I made a simulation using MMANA-GAL: the 10m far field plot will be as good as omni-directional whilst the 6m far field plot will be slightly flattened by 1dB at 0/180 degrees.

Below is the simulated SWR curve for the 10m FM segment of such a dipole.



Detailed SWR curve for the 4m band.



Variations?

The AXD-6-4 dual-band dipole is now a “working prototype”, however, given the experimental character of our hobby further experiments could be conducted to try to minimize element coupling or improve mechanical construction.

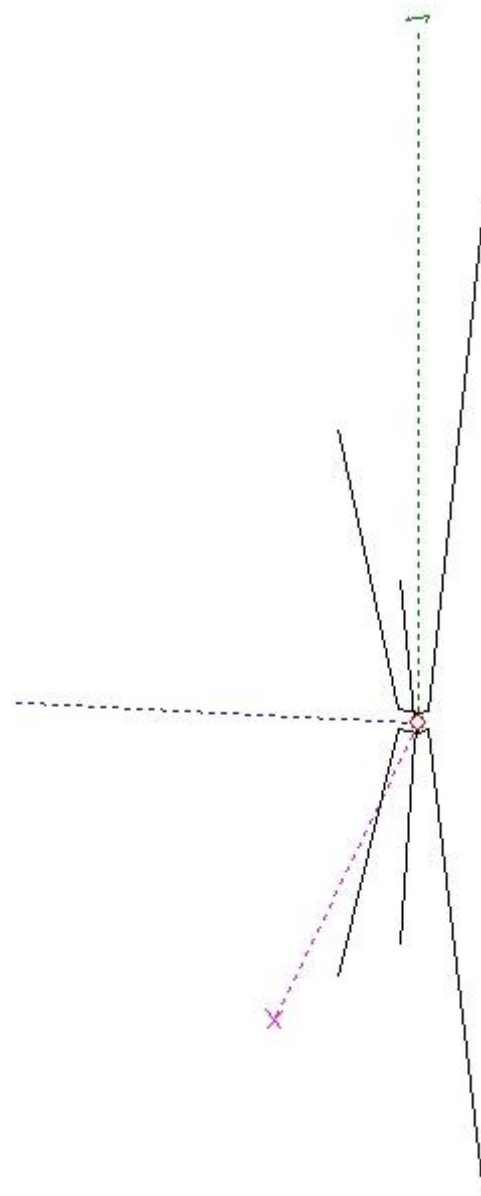
- Increase/decrease length of the horizontal section at the feed point
- Decrease vertical distance between elements at the feed point
- Vary element angle in Z-X plane from 10-20 degrees
- Incline elements also in Z-Y plane from 10-20 degrees

Other bands?

It is perfectly possible to mount the antenna horizontally and adjust element lengths for the SSB/CW segment of each band. A light duty TV rotator will suffice to turn the antenna.

How about 10m and 6m?

An AXD-10-6 dual-band dipole for 10m/6m [FM segments] would be a look-alike antenna. The construction and alignment methods are similar, first adjust the 10m dipole element, then the 6m dipole element.



Concept of a three dimensional dipole for 10m, 6m and 4m

How about 10m and 4m?

An AXD-10-4 might be for you if you are using a 10m/4m transverter or simply wanted a vertical antenna to try local FM contacts on both bands.

How about 10m and 6m and 4m?

This triple band dipole is only an idea at the moment. I did a quick simulation adding dipole elements in the same plane but this did not give satisfactory results. However, spacing the dipole elements at 120 degrees gave more satisfactory results though the concept of a three dimensional multi band dipole will require further research and optimisation.

How would such antenna look? Opposite is a simulation of the antenna wire diagram ... the mechanical construction would become quite challenging!

I wish you every success in building one of the above experimental dipoles!

73 de Phil ON4TA

WA1ZMS Awarded First Brendan Medal

Brian Justin (WA1ZMS), has been awarded the first Triennial Brendan Medal for his ongoing efforts in the promotion of propagation studies over the trans-Atlantic 2 metre path. He was nominated by Bart Jahnke, W9JJ. Brian maintains a 2m beacon in the USA (grid FM07fm) beaming Europe from an 1280-meter AMSL high Mountaintop in the State of Virginia. <http://directivesystems.com/WA1ZMS.htm>

The beacon operates on 144.285MHz CW, with two stacked high gain Yagis and using high power since October 2006. The beacon is GPS-synced so that any listener can know exactly when and where it is transmitting, and the message content is time coded. As his beacon operates continuously, should we ever experience a significant multi-hop E-cloud or Major Meteor Storm event, the beacon will undoubtedly be one of the first trans-Atlantic 2m signals that will be heard by Western European Amateur Stations.

WA1ZMS also has the only FCC-authorized 4m beacon in the USA which is also beaming to Europe. www.70mhz.org/index.php?categoryid=1&p2_articleid=365 The beacon log is at beaconspot.eu/beaconc.php?beaconc=WG2XPN&bandmhz=70

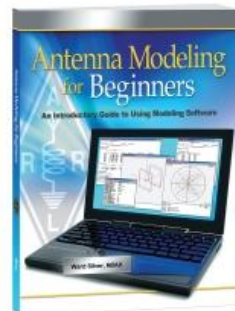
His 4m signal has been copied in Europe many times (including a 4m 4-cloud Eskip in July of 2013). WA1ZMS also has many propagation records firsts, for achievements and DX records on the Microwave Bands in the US. www.g3pho.free-online.co.uk/microwaves/records.htm

WA1ZMS is a radio amateur who stands out among his US and European peers as an extraordinary contributor to the promotion of propagation studies over the trans-Atlantic 2m path.

Brian was presented with the Brendan Medal by Séamus EI8BP at the ARRL 100 celebrations in Connecticut.

Antenna Modeling for Beginners by Ward Silver N0AX

Published by ARRL



Many of us put up an antenna, attach some kind of feeder, then head indoors to see what it sounds like. After a few weeks, we might try something else, comparing results and maybe wondering how to improve the DX situation.

Everyone swears by some antenna or other, but it's curious how many antennas never seem to work well at this QTH, 48 square metres of Wicklow in the centre of an estate surrounded by trees and hills.

In an attempt to gain some insight, EZNEC was tried. This antenna-modelling software, written by Roy Lewellan W7EL, is available free and although several attempts had been made to try it, results at EI8KG could best be described as patchy. There is nothing so frustrating as hacking.

N0AX changed everything with this book, which brings beginner and expert into the software in a thorough and repeatable manner. It is a tutorial and reference source and describes how to model anything, from dipoles to beams, verticals, radials and quads.

Many hams are wary of models ("Never have a QSO on a model", said in a gloomy voice), and perhaps they are correct. The key word here is wary. There's no harm in having a look at what EZNEC thinks your antenna might be doing, then working that antenna and seeing if you agree. A grain of caution is needed.

Using N0AX's book confirmed where to feed a delta loop for lowest take off. It is very satisfying to see what happens if the model you create is raised to 120 ft! At EI8KG it was always thought delta loops were insensitive to height above ground. This is because they work well close to earth, but through the modelling it is now clear just how much earth is involved.

EZNEC showed how a second delta loop positioned 1/8 wavelength in front could raise the front-to-back ratio. Spent a contented evening listening to west coast US on a real version of this antenna.

Without N0AX's book, EZNEC would be a mystery. Like all useful books, it has raised a few questions, mainly about earth.

Now if someone could show me how to measure the properties of earth under the delta loop (which just fits the diagonal of the back garden), I could test EZNEC against the space-time continuum that exists in Wicklow.

Dave Sholdice EI8KG dave.ei8kg@gmail.com



Excerpts from the HX files with Pat Fitzpatrick EI2HX - Excerpt 030

Hello and welcome to Xtract 030 of the HX files.

In this issue I would like to talk about some of the “few” parts bought at the Friedrichshafen Rally in June.

In *photo 1* you can see some of the leads and parts purchased, in the picture you maybe able to make out a couple of small monitors, various leads, fittings, and a couple of RF amplifiers.



Photo 1

Not in the photograph are a couple of transmitters, receivers, and a couple of aerials that were bought for some future projects. Some of the leads and fittings will be used to replace the ones taken out of other units not being used at the time, and the rest for stock. It may look like a lot, but when you take in to account the parts and modules used in a project, such as the transmitter, receiver, amplifier, preamp, relays, coaxial leads and aerial to be used, and the fact they all have to be joined together, it is a wonder any RF gets out at all, and you would be left wondering where did all the leads that were bought go to. *Ouch!*

On the subject of fittings and RF, in *photo 2* you can see some fittings, some of the connectors go as high as 24ghz, they are not exactly falling out of my hand and this lot had not a lot of change out of €120. As with any radio rally those of you who have attended rallies over the years would get to know the various sellers selling equipment and also other traders and buyers who have dealt with them. The fact that some of them have been in the business of designing and manufacturing for years, and take pride in showing their equipment is 100%, they would have the spec sheets of their products for you to inspect, some even go to the bother of bringing some test equipment to show the buyer the equipment running before you buy, even more important some of the traders would let you know the ones that whose claims of their equipment would not live up to what is stated on the label. *Bargain?*



Photo2

Prices can vary quite a bit as some items can have less of a demand in one country than another, and as a result you could buy well from one trader and in the next row of stalls see the same quality of gear from someone else a lot dearer/cheaper than the last trader, so when you have bought your parts for a steal, stop looking for them at other stalls to see how well you done as you will feel like you were robbed if you see them cheaper. The cheaper parts may just be that, cheaper, or be a cheap brand that may not be up to the spec you need and all that lovely RF will go any where but to the aerial.

In *photos 3 and 4 (overleaf)* you can see a couple of the amplifiers bought at the rally, one is for 5.7GHz and the other is for 10GHz; *photo 5* shows some more fittings.

The worst part of this rally is not having my own car with me, and seeing plenty that would fit nicely into the boot, not only the various new pieces of equipment, but the “scrap parts”. One piece of equipment bought was a repeater that could be modified for 10 GHz. These pieces of equipment weighed a



Photo3



Photo4



Photo5

few kilos more than my total allowance on the aeroplane, I would have loved to have brought a couple of the units home with me, not only was the enclosure a nice size but was meant

as a mast mounted unit and was waterproofed and it only had the waveguide connector and a small multi plug for the dc connections. Inside the unit, other than the TX/RX equipment, there were some lovely fittings and brackets to be had, but as this item was purchased on our last day at the rally we knew that the limits of our allowance was getting close and something had to be left behind, as the extra charge would have cost 5 times the amount paid for them, so knowing some of the traders I got a loan of some tools and the wanted parts removed, and in these recycling times, the metal container and other parts were given back to the trader to sell to someone else, he was so happy to take them back he said that we could have some of his other stock, as the container was a seller on its own and it saved him the grief to disassemble it.

As you know quality costs and I wished it didn't cost *that* much! Cheaper fittings and connectors could have been bought but they would have been no good at the frequencies I wanted them for. As mentioned earlier the need to get as much of the RF out of the equipment as possible and into the aerial is my priority. One of the high power transmitters (or should that be QRPP) bought can push out nearly 100mw so some high end connections (and a amplifier) will be used on this project. The amplifier will be a permanent outdoor unit, so now where can I get a professional waterproof enclosure to house everything and keep it dry and safe? That's it for this issue of Echo Ireland.

May your signals be P5!

73
Pat

Bill EI3DM 83rd Birthday Celebration

Bill celebrated his 83rd birthday on 14th June. At the birthday lunch was his sister Carmel, brother Brendan and friends at the Dropping Well, Milltown, Dublin. Bill had recently been in hospital and has completely recovered. He is now as sprightly as ever as you can see below.



Enjoying the party

Above: Patrick EI6CV, Pierce EI4CI & James EI3V

Below: Romie EI9ED, Bill EI3DM, Charlie EI2EM & Patrick EI6CV





AlexLoop Portable QRP Antenna

Review by Doug EI2CN / KC1AV

Editor's Note: The AlexLoop is a portable, QRP, magnetic loop antenna designed by Alex PY1AHD. Doug used it with Elecraft KX1 and KX3 rigs.

www.alexloop.com www.elecraft.com

The great features of the AlexLoop are convenience, portability, relative stealth and, most importantly, it works. It is supplied with a well-made carrying bag, with room for a KX1 and perhaps a KX3 inside besides the antenna. The weight, including coax and case, is approximately 1.6 kg. Seldom is there need for additional coax.

For the past year I have used this antenna indoors and outdoors in the USA, Ireland and Italy. From both the USA and Ireland, it has helped make QSOs across the Atlantic running 5W on CW.

Set-up is accomplished with antenna tuner disabled. Tune for maximum noise, maybe in SSB mode rather than CW for the greater noise; then to fine tune, put out a few dits on a clear frequency and adjust for minimum SWR. In most instances I get down to 1.2 to 1. Only in the presence of steel reinforced walls have I needed the built-in KX1/KX3 tuner.

The SWR is 1.3 or lower on 40m through 12m but for me has been excessively high (3:1) on 10m; perhaps the AlexLoop was not far enough from metal objects while on 10m.

Bandwidth is wide enough on 15m to leave the antenna set to the middle of the CW band and never retune. On 40m, retune the antenna about every 20kHz. With the antenna beside the operator, this is convenient.

The AlexLoop will not perform well near metal objects, be it steel reinforcing in walls, springs in an easy chair, a stack of radios or electrical wiring in the wall. A power line to your transceiver is not a problem as long as you do not drape it across the antenna. I have used it atop a steel reinforced wall in Italy and found in this instance the need for the KX3 antenna tuner once the AlexLoop was adjusted to frequency. A number of European QSOs were made with this arrangement but no North American QSOs on this occasion.

Shock cord whips at full length, without loading coils for 15m and 20m while using two raised radials showed no significant improvement when switching between the vertical and AlexLoop. This makes little sense, but is my observation. It is much easier to tune the AlexLoop to another band than to adjust the vertical lengths. The AlexLoop can be used inside a frame house or concrete block building without steel reinforcing. Then there's no need to go outside and adjust the antenna. Hotels with balconies or outside terraces can also be useful locations. It is convenience which convinced me to take only the AlexLoop on my travels.

The one-meter diameter antenna does not arouse too much worry, nor is it likely to disturb neighbours with wires dropping down below their balconies. I have had an Italian policewoman drive past me twice whilst operating on a park bench in Montecatini Alto; she observed and just smiled. The antenna has even been carried assembled on a hotel elevator to the rooftop garden. Small and light are major helps. The directivity is most useful in nulling local electrical noise, but is far less evident as regards the received signal. Do not expect great front-to-back or front-to-side rejection.

My favourite deployment for the AlexLoop is on a walking stick or broom handle set in a tripod, but who wants to carry a

tripod in aircraft luggage? You do not need a tripod. If your easy chair has no springs or metal in it, then rest the antenna on the chair or against furniture. Do not place a metal tube through the AlexLoop for support. I have rested the AlexLoop against concrete walls and extending out beyond such walls tying it with the supplied cord or dental floss. The one-meter diameter antenna is light and easy to install. Try hard to keep the antenna within arms' reach of the operating position. The AlexLoop website gives many examples of installation. I have rested the antenna atop shrubs and hung it from branches. Try to mount a meter above the ground and forget masts.

The AlexLoop is no Gotham Vertical, nor is it a G5RV thirty feet above ground. It does work though and whilst running QRP you can have many QSOs. 20 watts is the maximum power when operating SSB or CW – data modes would probably require dropping to 10 watts or less. I use the antenna on CW using five watts. I do not call CQ but look for stronger signals calling CQ or in QSO for a call when the QSO finishes. It is harder to ragchew, but such contacts are enjoyed. Some people get interested when you describe the set-up. I never call with a /QRP and practically never call CQ when running QRP. Some signals are so weak that you are not likely to work them but you can make QSOs and for me this is great fun.

In the 2014 CW WPX, I had 197 QSOs on 40, 20 and 15m running 5 watts. This was a casual effort with early to bed and late to rise regime and plenty of breaks during the day for meals, socialising and exercise. The AlexLoop was inside my sister's Connecticut frame house for most of this operation, with some periods outside on her patio running from batteries. I did not find much difference between operations with the AlexLoop indoors or outdoors. Strong European signals were easily worked on 15m and 20m. Many west-coast, South American and West Indies QSOs were made, plus a few in Africa. I heard Japan and Asiatic Russia, but could not raise either. Europe was heard on 40 metres, but could not be worked; however, a number of QSOs up and down the east coast and into the mid-west were made on 40m. I did not work late into the night and concentrated on 20 during darkness so forty did not get a fair shake. The AlexLoop works on 40 and would work Europe under favourable conditions. Most of these European QSOs were made with the antenna indoors a couple of feet from the radio. I've made many cross-Atlantic QSOs from both sides of the pond.

The AlexLoop is not inexpensive, costing \$300 plus \$69 to ship to the USA, but this is a good price for an antenna which works and is both convenient and portable. Compare it to other antennas you will find the cost looks reasonable.

There are other magnetic loop antennas available, but none I know of are as portable. If you can put a G5RV up, then leave the AlexLoop for more problematic locations.



EI DXCC Listings (as at August 14th 2014)

Mixed

365 EI8H
353 EI7CC
351 EI6S
348 EI6FR
346 EI8EM
344 EI7BA
340 EI2GS
326 EI3IO
324 EI9FBB
317 EI9O
314 EI5GM
310 EI4II (+7)
306 EI2HY
301 EI2GLB
300 EI8FH
295 EI2JD
295 EI4CF
293 EI2CR
290 EI6IZ (+7)
287 EI9JF
269 EI8GS
269 EI8IU (+9)
269 EI9FVB
264 EI4BZ
262 EI2GX
251 EI7JZ (+10)
250 EI9GLB
243 EI6JK
241 EI1DG
233 EI7GY
230 EI4GXB
228 EI4HH
216 EI6AL
210 EI6IL
209 EI7JN
198 EI9E
196 EI5IF
193 EI3HA
191 EI6HB
188 EI4IR
169 EI9HQ
150 EI3CTB
135 EI9CF
131 EI5FQB
131 EI5GSB
129 EI5GUB
128 EI8HA
127 EI9CJ
124 EI7IG
115 EI5JQ
112 EI6CPB (New)
108 EI5EV
104 EI9GWB
103 EI3HDB
101 EI7JQ
101 EI8JB
100 EI3GAB
100 EI4HQ
100 EI8KF (New)

Phone

351 EI7CC
348 EI6S
346 EI8EM
342 EI7BA (+1)
338 EI2GS
336 EI6FR (+3)
331 EI8AR
310 EI9FBB
309 EI3GV
300 EI8AU
296 EI4GK
278 EI2JD
269 EI8GS
269 EI9FVB
264 EI9HX
260 EI4CF
250 EI9GLB

242 EI7JZ (+11)
241 EI2GLB
241 EI6JK
225 EI8IU (+9)
225 EI9JF
213 EI7GL
208 EI4GJB
206 EI4BZ
202 EI4HH
200 EI6IL
200 EI8FH
191 EI9E
191 EI3HA
188 EI2CH
186 EI7II
177 EI9FE
160 EI2II
160 EI6HB
160 EI9HQ
155 EI5IF
135 EI6AL
131 EI5FQB
131 EI5GSB
120 EI3CTB
112 EI6CPB (+12)
105 EI1CS
103 EI3HDB
103 EI6GGB
102 EI4DJB
101 EI3IP
101 EI4GNB
100 EI3GAB

CW

337 EI7BA
329 EI7CC
325 EI6FR (+6)
306 EI9FBB
292 EI8FH
283 EI6IZ (+9)
280 EI4CF
278 EI2JD
253 EI9JF
243 EI2GLB
242 EI4BZ
233 EI8IU (+8)
226 EI7GY
215 EI5GM
204 EI1DG
202 EI6AL
158 EI4HH
158 EI8JX
131 EI7JZ (+11)
127 EI9CF
109 EI2IH
109 EI4HM
109 EI7IG
109 EI9E
104 EI6HB
100 EI3KG

RTTY/Digital

290 EI7BA (+2)
211 EI1DG
200 EI6FR (+19)
163 EI2GLB
148 EI8FH
148 EI8IU (+21)
121 EI6HB
110 EI3CTB
104 EI5IF

160m

242 EI7BA
212 EI3IO
140 EI6IZ (+5)
135 EI9FBB
121 EI2JD

80m

304 EI6S
291 EI7BA (+2)
239 EI9FBB
164 EI2JD
150 EI6FR (+2)
142 EI3IO
134 EI6IZ (+5)
119 EI4BZ
103 EI8GS
102 EI7GY
101 EI9E

40m

315 EI7BA
250 EI9FBB
221 EI6FR (+6)
203 EI4CF
200 EI2JD
199 EI6IZ (+9)
185 EI3IO
177 EI9JF
154 EI6JK
151 EI2GLB
139 EI4BZ
129 EI8GS
127 EI9E
127 EI7JZ (+5)
119 EI7GY
117 EI7GL
105 EI9FVB
100 EI1DG

30m

325 EI7BA (+1)
248 EI9FBB
223 EI3IO
213 EI6FR (+10)
209 EI6IZ (+9)
167 EI9JF
151 EI7GY
123 EI2JD
120 EI4BZ
111 EI8IU (+2)
101 EI2GLB

20m

338 EI7BA
328 EI6FR (+1)
315 EI9FBB
256 EI2JD
251 EI3IO
243 EI4CF
222 EI9FVB
217 EI9JF
216 EI6IZ (+10)
211 EI8GS
198 EI2GLB
195 EI4BZ
184 EI1DG
186 EI8IU (+8)
179 EI7JZ (+8)
171 EI7JN
164 EI9E
161 EI6JK
154 EI7GY
149 EI9GLB (+2)
145 EI6HB
144 EI4GJB
130 EI3GV
126 EI3HA
122 EI5IF
118 EI9HQ
112 EI4GK
112 EI8IQ
109 EI4HH
107 EI3CTB
106 EI6AL

105 EI2II
103 EI5FQB
102 EI5GSB

17m

333 EI7BA
293 EI9FBB
265 EI6FR (+12)
190 EI2JD
190 EI6IZ (+15)
179 EI8IU (+15)
163 EI2GLB
160 EI9FVB
156 EI7GY
146 EI9JF
135 EI4CF
135 EI6AL
129 EI3IO
127 EI4GJB
121 EI1DG
116 EI7JZ (+9)
108 EI3GV
108 EI4BZ
100 EI9GLB (New)

15m

329 EI7BA (+1)
288 EI9FBB
294 EI6FR (+11)
243 EI4CF
230 EI2JD
204 EI3IO
200 EI2GLB
198 EI9FVB
194 EI4BZ
194 EI6IZ (+13)
193 EI6JK
185 EI8IU (+21)
181 EI8GS
173 EI9E
162 EI1DG
153 EI7JZ (+3)
144 EI7GY
136 EI6HB
129 EI6AL
126 EI9GLB (+1)
120 EI4HH
120 EI4GJB
113 EI3GV
109 EI7JN
105 EI9JF
104 EI4GK

12m

318 EI7BA (+ 2)
259 EI9FBB
150 EI8IU (+14)
145 EI2JD
142 EI9FVB
141 EI6FR (+24)
140 EI6JK
119 EI6AL
114 EI2GLB
114 EI7GY
109 EI6IZ (+9)
106 EI3IO
103 EI1DG
101 EI7JZ (New)
100 EI4GJB

10m

301 EI7BA (+2)
258 EI9FBB
257 EI3IO

201 EI6FR (+10)
196 EI2JD
191 EI2GLB
184 EI4CF
182 EI4BZ
173 EI6JK
171 EI8GS
155 EI4HH
155 EI9E
148 EI9FVB
144 EI1DG
144 EI7GL
142 EI8IU (+12)
137 EI6IZ (+8)
133 EI4GK
130 EI6AL
129 EI7JZ (+13)
127 EI7GY
112 EI4GJB
111 EI9CJ
110 EI9GLB (+3)
105 EI6HB
104 EI3GV
101 EI2II

6m

160 EI3IO
135 EI9FBB
111 EI7GL
110 EI7BA (+5)
107 EI2JD
101 EI2GLB
101 EI3EBB

2m

113 EI4DQ

See www.arrl.org/dxcc

DXCC Honor Roll

Mixed

340 EI6FR/348
339 EI7BA/344
338 EI7CC/353
338 EI8EM/346
337 EI8H/365
332 EI6S/351
332 EI2GS/340

Phone

338 EI8EM/346
337 EI7BA/342
336 EI7CC/351
331 EI6S/348

CW
333 EI7BA/337

DXCC Challenge

2,868 EI7BA (+ 13)
2,400 EI9FBB
1,850 EI3IO
1,892 EI6FR (+83)
1,717 EI2JD
1,654 EI7CC
1,584 EI6IZ (+92)
1,348 EI4CF
1,318 EI2GLB
1,149 EI9FVB
1,139 EI4BZ
1,120 EI7GY
1,090 EI6JK
1,080 EI8IU (+77)
1,018 EI9JF
1,013 EI1DG

EI DXCC Listings														EIs on eQSL (as at August 14th 2014)															
Contd.														Updates and enquiries to Thos EI2JD - thoscaffrey@hotmail.com															
DXCC Single Band Status (14/08/14)														DXCC Confirmed															
160 80 40 30 20 17 15 12 10 6 2														252	EI7BA (+1)	94	EI6AK (+44)	25	EI9GNB (New)										
10	EI9FBB	160	80	40	30	20	17	15	12	10	6	-	2	227	EI9O (+4)	90	EI6CPB (+3)	24	EI8GNB										
10	EI3IO	160	80	40	30	20	17	15	12	10	6	-		219	EI7CC (+3)	88	EI8JB (+20)									Worked Prefixes			
10	EI2JD	160	80	40	30	20	17	15	12	10	6	-		216	EI9JU (+3)	88	EI4GAB (+1)									1,739	EI4CF (+30)		
10	EI7BA	160	80	40	30	20	17	15	12	10	6	-		215	EI4CF (+2)	85	EI7IQ									1,700	EI6JK (+47)		
9	EI6IZ	160	80	40	30	20	17	15	12	10	-	-		211	EI9FBB (+1)	85	EI7GUB (+14)									1,661	EI9E (+17)		
8	EI6FR	-	80	40	30	20	17	15	12	10	-	-		205	EI0CZ (+40)	84	EI4IS (+23)									1,638	EI7CC (+48)		
8	EI2GLB	-	-	40	30	20	17	15	12	10	6	-		197	EI3IO (+2)	84	EI3HMB (+14)									1,566	EI9JU (+39)		
8	EI7GY	-	80	40	30	20	17	15	12	10	-	-		196	EI2KC (+7)	84	EI7BFB									1,423	EI8GS (+14)		
7	EI4BZ	-	80	40	30	20	17	15	-	10	-	-		192	EI2JD (+1)	84	EI9GGB (+6)									1,356	EI7JN (+17)		
6	EI9FVB	-	-	40	-	20	17	15	12	10	-	-		192	EI9KC (+3)	83	EI8JK									1,344	EI2JD		
6	EI8IU	-	-	-	30	20	17	15	12	10	-	-		188	EI7JN (+34)	83	EI9FV (+19)									1,310	EI0CZ (+37)		
6	EI1DG	-	-	40	-	20	17	15	12	10	-	-		188	EI4GJB (+19)	83	EI9GWB (+37)									1,303	EI3KG (+69)		
6	EI7JZ	-	-	40	-	20	17	15	12	10	-	-		187	EI6JK (+3)	82	EI2HW (+1)									1,288	EI9FBB (+23)		
5	EI4GJB	-	-	-	-	20	17	15	12	10	-	-		185	EI6IL (+12)	80	EI9EW									1,256	EI0W (+14)		
5	EI6AL	-	-	-	-	20	17	15	12	10	-	-		185	EI2GLB (+2)	79	EI6GGB (+1)									1,254	EI3CTB (+85)		
5	EI8GS	-	80	40	-	20	-	15	-	10	-	-		182	EI3KG (+5)	76	EI8DL (+2)									1,246	EI1DG (+43)		
5	EI9JF	-	-	40	30	20	17	15	-	-	-	-		179	EI8IU (+4)	76	EI3HGB (+3)									1,227	EI2KC (+48)		
5	EI9E	-	80	40	-	20	-	15	-	10	-	-		179	EI3GYB (+1)	76	EI9CBB (New)									1,205	EI4GXB (+19)		
5	EI4CF	-	-	40	-	20	17	15	-	10	-	-		178	EI1DG (+7)	75	EI4IR (+34)									1,199	EI9KC (+51)		
5	EI6JK	-	-	40	-	20	-	15	12	10	-	-		177	EI4GXB (+67)	75	EI9JM (+14)									1,166	EI9HQ (+20)		
4	EI3GV	-	-	-	-	20	17	15	-	10	-	-		176	EI8FH (+5)	74	EI5IX (+2)									1,152	EI7JK (+27)		
4	EI9GLB	-	-	-	-	20	17	15	-	10	-	-		173	EI8GS (+4)	73	EI6IF									1,112	EI2GLB (+13)		
3	EI4GK	-	-	-	-	20	-	15	-	10	-	-		171	EI9JF	73	EI8GP (+2)									1,062	EI8FH (+46)		
3	EI4HH	-	-	-	-	20	-	15	-	10	-	-		170	EI9FVB (+1)	73	EI6ARB (+8)									409	EI0PL		
3	EI6HB	-	-	-	-	20	-	15	-	10	-	-		165	EI7JZ (+3)	70	EI4HLB (+17)									1,005	EI3IO (+24)		
3	EI7GL	-	-	40	-	-	-	-	-	10	6	-		163	EI8IQ (+1)	67	EI1571									988	EI7BA (+14)		
2	EI2II	-	-	-	-	20	-	-	-	10	-	-		163	EI6AL (+5)	66	EI7BMB (+1)									974	EI7GSB (+39)		
2	EI7JN	-	-	-	-	20	-	15	-	-	-	-		153	EI4HH (+3)	65	EI5HE (+6)									966	EI9FVB (+49)		
1	EI3EBB	-	-	-	-	-	-	-	-	-	6	-		152	EI9E	65	EI3HBB									958	EI2II (+4)		
1	EI3HA	-	-	-	-	20	-	-	-	-	-	-		152	EI5GM (+1)	65	EI8DD									949	EI7JZ (+46)		
1	EI4DQ	-	-	-	-	-	-	-	-	-	-	2		150	EI4II	64	EI2IV (+44)									939	EI4GNB (+8)		
1	EI5FQB	-	-	-	-	20	-	-	-	-	-	-		148	EI0W (+3)	63	EI5DD									911	EI8IU (+53)		
1	EI5GSB	-	-	-	-	20	-	-	-	-	-	-		148	EI9HX	62	EI4CN (+25)									909	EI6AL (+26)		
1	EI5IF	-	-	-	-	20	-	-	-	-	-	-		147	EI6IZ	62	EI9KF (+2)									903	EI8BLB (+49)		
1	EI6S	-	80	-	-	-	-	-	-	-	-	-		146	EI5JQ (+2)	60	EI5GB (+2)									890	EI5HV (+44)		
1	EI8IQ	-	-	-	-	20	-	-	-	-	-	-		145	EI5IF (+2)	60	EI5ASB (+6)									880	EI4BZ (+11)		
1	EI9CJ	-	-	-	-	-	-	-	-	-	10	-		143	EI6HB	59	EI4GD (+2)									857	EI3KI (+129)		
1	EI9HQ	-	-	-	-	20	-	-	-	-	-	-		141	EI9GLB (+5)	59	EI3HVB (+13)									816	EI3GAB (+52)		
1	EI3CTB	-	-	-	-	20	-	-	-	-	-	-		138	EI6GHB (+6)	58	EI4IN									816	EI3HDB (+448)		
160 80 40 30 20 17 15 12 10 6 2														137	EI8BLB (+6)	58	EI7IS (+15)									808	EI5JQ (+14)		
														136	EI7JK (+2)	57	EI1509 (+2)									776	EI4GAB (+15)		
														133	EI3KE (+2)	57	EI5GN (+2)									760	EI9O (+10)		
														132	EI3CTB	57	EI2HRB (+6)									754	EI8IQ (+14)		
														132	EI4GNB	55	EI8H									747	EI3GYB (+23)		
														131	EI3KI (+7)	55	EI8JW (+3)									735	EI5IF (+4)		
														130	EI2II (+1)	55	EI6GGB									718	EI3JB (+59)		
														128	EI3HA (+2)	54	EI7GEB (+8)									704	EI3KE (+26)		
														128	EI4BZ	53	EI1429									677	EI5GSB (+12)		
														128	EI9HQ	53	EI7CHB									668	EI5GM (+3)		
														125	EI5HV (+6)	52	EI3EBB (+5)									665	EI8JB (+8)		
														125	EI8JB (+57)	51	EI4GMB (+3)									648	EI8HL (+15)		
														122	EI5GSB (+1)	50	EI2BWB									644	EI9GSB (+64)		
														118	EI3GAB (+3)	49	EI9GRB (+9)									610	EI4KE (+26)		
														116	EI7GSB (+1)	47	EI7GM (+5)									586	EI5GJB (+5)		
														114	EI5EV (+3)	47	EI7CEB (New)									583	EI9GLB (+107)		
														113	EI4KE (+3)	46	EI1665									582	EI9JM (+3)		
														113	EI7IX (+1)	46	EI9KG (New)									552	EI3HA (+11)		
														112	EI4HQ (+25)	45	EI7GBB									522	EI4HH (+12)		
														111	EI7M	44	EI4DIB (+1)									507	EI5JQ (New)		
														111	EI3JB (+5)	41	EI2FS									502	EI3IS (+5)		
														110	EI3HDB (+4)	41	EI5HT (New)									486	EI9GTB (New)		
														108	EI8HL (+3)	40	EI1666 (+3)									473	EI7IX (+21)		
														106	EI9KB (+21)	40	EI3GGB (+6)									451	EI2HW (New)		
														106	EI5GUB	39	EI4HX									433	EI8GP (+4)		
														105	EI5GJB (+1)	39	EI7CSB (+6)									409	EI0PL		
														102	EI3GD (+6)	38	EI2HZB (New)									322	EI4HLB (New)		
														102	EI9GSB (+6)	38	EI3GDB									317	EI3HMB (New)		
														101	EI9ES	35	EI8JA (New)									273	EI3HVB (New)		
														99	EI8JR (+2)	31	EI3FFB (New)									200	EI4GMB		
														98	EI0PL	31	EI7GZB									121	EI4DIB		
														97	EI6GF (+27)	28	EI2HEB									76	EI4HX		
														96	EI9CF	28	EI8GGB (New)									60	EI7IW		
														95	EI9GTB(+2)	28	EI7IW (+2)												

Echo Ireland

December 2014 Edition

The deadline for receipt of copy for the December edition is

14th November

Members Advertisements

Kenwood TS-430S with hand mic and power lead, original box €400
Yaesu FT-736 base station 6m, 2m 70cms, including MD-1 mic €800.
 Gerard EI5KF - 087 254 6482

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Uniden Bearcat UBC800XLT with PC cable etc. **20A compact switched mode PSU**. All boxed and in excellent condition. Non-smoker. Little used.
 Conor 087-7993085

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FT902 DM HF rig €275. Both in good working order.
HY Gain DB 1217 trapless 7-el double monobander beam, new in box and unassembled €400.
MFJ 434B voice keyer, boxed and unused €180.
MFJ 259B antenna analyser, new & unused €180.
VFO for Yaesu FT101ZD, used, €100. Second hand **Hustler 5BTV** vertical antenna €100.
 For collection or plus P&P.
 Ed Kelly, EI5DR, Co. Mayo.
 nosmas5@yahoo.ie

Yaesu FT707 HF transceiver, 80m to 10m including WARC bands. Near mint condition, boxed with manuals, €295 ovno. **Spectrum Communication 6m Transverter** (kit built) 28 MHz IF Suit FT707, FT101/2, FT901/2 €75
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